QUALITY OF LIFE AMONG ACCIDENTAL POST BURN PATIENTS ATTENDING PLASTIC SURGERY OPD AT GOVT. RAJAJI HOSPITAL, MADURAI.

M.Sc (NURSING) DEGREE EXAMINATION

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THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY,

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In partial fulfillment of the requirement for the degree of

MASTER OF SCIENCE IN NURSING

OCTOBER 2018

QUALITY OF LIFE AMONG ACCIDENTAL POST BURN PATIENTS ATTENDING PLASTIC SURGERY OPD AT GOVT.RAJAJI HOSPITAL, MADURAI.

Approved by Dissertation committee on

Nursing Research Guide _____

DR .S. RAJAMANI, M.Sc (N)., M.B.A (HM)., M.Sc (Psy)., Ph.D.,
Principal Incharge,
College of Nursing,
Madurai Medical College,
Madurai.

Clinical Specialty Guide ——————

DR. S. RAJAMANI, M.Sc (N)., M.B.A (HM)., M.Sc (Psy)., Ph.D.,
Reader in Nursing,
Department of Psychiatric (Mental Health) Nursing,
College of Nursing,
Madurai Medical College,
Madurai.

Medical Expert _____

Dr. T. KUMANAN, M.D., DPM.,
Professor and H.O.D,
Department of Psychiatry,
Madurai Medical College,
Madurai.

A dissertation submitted to

THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY,

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CERTIFICATE

This is to certify that this dissertation titled**, "QUALITY OF LIFE AMONG ACCIDENTAL POST BURN PATIENTS ATTENDING PLASTIC SURGERY OPD AT GOVT. RAJAI HOSPITAL, MADURAI"** is a bonafide work done by **Ms.B.JANANI,** M.Sc (N) Student, College of Nursing, Madurai Medical College, Madurai - 20, submitted to THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY, CHENNAI in partial fulfillment of the university rules and regulations towards the award of the degree of **MASTER OF SCIENCE IN NURSING, Branch V-Mental Health Nursing,** under our guidance and supervision during the academic period from 2016 -2018.

Dr. S. RAJAMANI, M.Sc (N)., M.B.A (HM)., M.Sc (Psy)., Ph.D.,
Principal Incharge,
College of Nursing,
Madurai Medical College,
Madurai.20.

Dr. D. MARUTHU PANDIAN, M.S., F.I.C.S., F.A.I.S.,
Dean,
Madurai Medical College
Madurai-20

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Name and Signature of the Clinical Specialty Guide _____

Dr. S. RAJAMANI, M.Sc (N)., M.B.A (HM)., M.Sc (Psy)., Ph.D.,
Reader in Nursing,
Department of Psychiatry (Mental Health) Nursing,
College of Nursing,
Madurai Medical College,
Madurai.20.

Name and Signature of the Head of the Department _____

Dr. S. RAJAMANI, M.Sc (N)., M.B.A (HM)., M.Sc (Psy)., Ph.D.,
Principal Incharge,
College of Nursing,
Madurai Medical College,
Madurai.20.

Name and Signature of the Dean _____

Dr. D. MARUTHU PANDIAN, M.S., F.I.C.S., F.A.I.S.,
Dean,
Madurai Medical College,
Madurai-20.

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ABSTRACT

Title: Quality of life among accidental post burn patients attending plastic surgery OPD at Govt Rajaji Hospital, Madurai. **Objectives:** To assess the quality of life among accidental post burn patients. To compare the quality of life among male and female accidental post burn patients. To associate the quality of life among male and female accidental post burn patients and their selected socio demographic and baseline variables. **Hypotheses:** There is a statistically significant difference between quality of life among male and female accidental post burn patients. There is a statistically significant association between quality of life among male and female accidental post burn patients and their selected socio demographic and baseline variables. **Methodology:** Non experimental descriptive research design was used, 100 accidental post burn patients were selected by non-probability (consecutive) sampling and assessed through Burn specific health scale-Brief tool. **Results:** The study revealed that majority of the subjects, 24 (48%) of female and 21 (42%) of male, were had very good and average quality of life respectively. **Conclusion:** The study findings evidence that male had lower level of quality of life than female accidental post burn patients.

Key words: Quality of life, Accidental post burn patients.

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INTRODUCTION

CHAPTER – 1

INTRODUCTION

“ Fire Is A Necessary Evil. Even before the Primitive Man Learned to Use Fire, He Has Been a Victim of It ’’ -Mark appaiah, 2007

Human life is all about building a family and leading "life” as it is. For some, life is all about accumulating wealth. For others, life is all about engaging in academic circle. Still for others, life is all about art. For many life is all about love. For a few, life is all about religious practices. For philosopher like Aristotle life is about happiness. “Happiness is the meaning and the purpose of life, the whole aim and end of human existence”.

Quality of life is an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns”. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment. Quality of life has a wide range of contexts, including the fields of international development, healthcare, politics and employment. **(WHO, 2016)**

Indirect estimates by the World Health Organization (WHO) and the Global Burden of Diseases Study (GBD) suggest that unintentional injuries account for 3.9 million deaths worldwide, of which about 90% occur in low- and middle-income countries. The majority of these deaths are attributable to road traffic injuries, falls, drowning; poisoning and burns. Unintentional injuries are an important cause of death in India. Unintentional injury caused 648 000 deaths (7% of all deaths; 58/100 000 population). Road traffic injuries (185 000 deaths; 29% of all unintentional injury

deaths), falls (160 000 deaths, 25%) and drowning (73 000 deaths, 11%) were the three leading causes of unintentional injury mortality, with fire-related injury causing 5% of these deaths. **(Jagnoor Jagnoor, Wilson Suraweera and Lisa Keay,2016).**

Burns are the major health problem and fourth frequent cause of trauma have tremendous medico-legal importance as they may be considered to be the commonest cause of unnatural death in India. A major burn is one of the most severe traumas a person can experience and a life threatening state in which all of the main integrating systems in the body are affected. Burns occur either as self-immolation or accidental.**(Faiza Shahid,2017)**

Self-immolation burns are infrequent, but they are a regular cause of hospitalization in burn units. In Asia (Iran, India and Iraq), the incidence of self-produced burn injuries is high, with previous reports indicating 9 to 32% of total admissions for burns. This represents a huge problem, as they are usually extensive and deep burns, and patients often have a history of psychiatric illness and difficulties in family relationship.On the other hand, accidental burn injuries (35, 56%) occurred more frequently than suicidal injuries (26, 41%). Some 3% were homicidal burn injuries**. (Faiza Shahid, 2017)**

In a study on prevalence and incidence of medico legal aspects in burn victims: ten years study, 178 patients were studied, among them 146 (82.02%) were accidental burns with more prevalence among females (81.50%).23 patients were homicidal burns and all were females while 9 (5.06%) patients sustains suicidal burns and among them 6 (66.66%) were females**.(Ishtiaq Ahmed and Umar Farooq,2009)**

A burn injury implies damage to or destruction of living tissue, in the overwhelming majority of cases the skin, by thermal, chemical, electrical radiation energy, combinations thereof. When the skin is seriously damaged, the properties of

that tissue are lost, the barrier function is destroyed and the internal milieu is exposed to and affected by threatening surroundings**. (Prema Malik, 2012)**

Burn injuries are one of the major environmental factors responsible for significant mortality and morbidity in developing countries. Death due to burns is an important public health problem. Accidental burns account for a considerable number of burns admissions worldwide. Non – fatal burns are a leading cause of morbidity, including prolonged hospitalization, disfigurement and disability, often with resulting stigma and rejection. **(Prema Malik, 2012)**

Burn injuries are among the most devastating of all injuries and have been recognized as a major global public health problem which contributes approximately 90% of all burns and greater than 95% of global burn death, estimated at over 300,000 each year. Burns injury and its associated mortality and morbidity is prevalent all over the world but it has an altogether different significance in India.

According to WHO estimates about 265 000 deaths occur each year from fires alone globally, with more deaths from scalds, electrical burns, and other forms of burns for which data are not available. The majority of these deaths occur in low and middle income countries, with almost half occur in the WHO South – East Region. In India around 7 million people suffer from burn injuries each year with 1.4 lakh deaths and 2.4 lakh people with suffer with disability.

Burn scars after dermal injury are cosmetically disfiguring and forced the scarred person to deal with an alteration in body image or appearance. Also the dramatic nature of the burn accident and the painful treatment induce psychopathological responses. Problems in mental area are more disabling than physical problems. Social problems include difficulties in sexual life and social interactions.

The extent of full thickness injury, number of operations, location of injury to face hands and feet, impaired hand function and joint contractures have all been reported as injury – specific threats to patient self – perceived health. Moreover, pain and discomfort, pre – and post – injury psychopathology and substance abuse seem to impair health and functioning. On the other hand, social support, self – efficacy, optimism, resilience or feelings of post- traumatic growth seem to improve perceived recovery after burns.

Mediating variables such as low social support, avoiding coping styles and personality traits such as neuroticism and low extroversion negatively affect adjustment after burn injury. Quality of life is initially lower in burn patients compared to general population but it improves over a period of many years.

Quality of life is initially lower in burn patients compared to general population but it improves over a period of many years. Long term sequels of burn injury indicated that many burn survivors achieve a quality of life that was satisfying to them. Quality of life that the patients with burns sustain as an after math of the psychological trauma they undergo following disfigurement and disability out of burns and the assessment of factors affecting quality of life in burn patients.

Burn injuries have a negative impact in Health related quality of life and self – esteem. Female gender, alcohol abuse and use of illicit drugs were associated with impaired Health related quality of life. Burn injuries commonly lead to changes in appearance, such as visible scars, which may lead to reduced self – esteem and social isolation. The assessment of Health related quality of life and self- esteem may contribute to the planning of interventions aimed at minimizing the impact of burns on the daily life of this patient population. Burn scar visibility and severity did have a

strong relationship with the quality of life in the survivors of a major burn who received allotransplant.

Attempted suicide by burning represents 5.4% of the total number of patients with burns that required hospitalization. The highest rates of self-inflicted burns were reported in India (40%), Sri Lanka (25%), Egypt (17%) and Iran (14.5%).In this study, most individuals who attempted suicide by burning (66.7%) were between the ages of 20 and 40 years, similar to other reports, since people in this age often incur different risk situations (at work, social environment and marriage) that may cause distress or an unexpected response. Most studies revealed that family problems (partner addictions, differences in age, little understanding of the partner, bigamy, lack of interest in family), lack of affection and early marriages are the most important reasons that lead to suicide by burning, particularly among women which primarily occurs in the indoors with evidence of suicidal notes. The study concludes that the primary intent to commit self-harm by burning and mutilation is attention seeking. This kind of attitude is called active-passive and can be related to the parasuicidal behavior. **(Jefferson Lessa Soares de Macedo, 2015).**

In contrast, accidental burns occurs without the knowledge of the individual, at both indoors and outdoors. Burning incidents amongst women are a major concern in India as they have become pervasive throughout all social strata and geographical areas. The observations of the present study that 56% of these victims belonged to the age group of 21 to 30 years, 77% had a total body surface area involvement of 31 to 70% speak for itself. As for the female predominance, females are mostly involved in cooking and the most common cause of fire in the accidental series of the study was as a result of stove bursts. In this study most of injuries are accidental in nature. These observations were in conformity with other studies from the various regions in India

and in contrast to the studies from other developing and the developed countries. **(Arpan Mazumder and Amarjyoti Patowary, 2015)**

Moreover the accidental post burn patients have a negative aftermath consequences compared with the self-immolation post burns. Self-immolation burn patients had already set up their mind to injure themselves and end their life by burns. Whereas the accidental burns patients gets exposed to the incident without their expectancy. Thus the accidental post burn patients have an anxiety about their future in mind about their post burn scars or the inability to work as previously. They frequently express about their worries on the burn incident that took place and the treatment to be followed. Thus lowering their quality of life. Accidental burn patients have to be assessed on their perception of life after burns which helps in analysing the treatment, outcome and discuss about the prevention and precautionary measures which decreases the morbidity and mortality.

Quality of life in burn injured patients was affected by severity of burn injury. The eventual outcome for burn patients is related to injury severity, individual physical characteristics of patients, motivation of patient, quality of treatment and after care support. Burn patients often require years of supervised rehabilitation, reconstruction and psychosocial support. The quality of burn care is no longer measured only by survival but also by long term function and appearance.

According to the phoenix Burn injury lawyer often create problems for burn victims long after maximum healing has taken place. Disfiguring scares are one of the most common problems that linger for burn victims. The physical and emotional pain of scars on the face, hands and other visible areas is one way burn victims may suffer for years after the injury. 5% of burn victims reported moderate difficulties with mobility after surviving a burn injury. Scar tissue is tighter and makes

moving difficult in many cases, reducing your ability to move freely after recovery from the initial burn. 21% reported moderate problems with self – care while 36.9% reported extreme difficulties. The pain and damage caused by burns often cause major difficulties in self – care. 5% reported moderate problems and 21% reported extreme problems with usual activities. **(Knapp & Roberts, in Scottsdale and phoenix, Arizona).**

Common activities such as work, normal hobbies and regular household chores can prove painful and difficult after suffering a burn. 5% reported moderate pain while 10.5% reported extreme pain affecting them well after the burn. 9 reported moderate and 42.1 % reported extreme anxiety or depression after a burn injury. The trauma of the injury, the pain and lingering difficulties combine to create great emotional distress for those who suffer a burn. Almost no one suffering a moderate to severe burn injury returns to the quality of life he or she had before their injury. Major difficulties and problems lie ahead for years to come and often for the rest of your life**. (Knapp & Roberts, in Scottsdale and phoenix, Arizona).**

1.1 Need for Study

According to WHO (2012), viewed globally, burn injury is one of the leading causes of trauma death and one of the 30 leading causes of loss of years worldwide due to premature mortality and years lived with disability. There are large differences between countries with respect to the incidence of burn injuries. In general, industrial countries have lower incidences than developmental countries. This is not unexpected, as the number of burns in a country reflects the amount of exposure to risky situations. According to WHO, in India, over 10lakhs people are moderately or severely burn every year.

Accidental burn injury is one of the leading death and among the 30 leading causes of loss of years due to premature mortality and years lived with disability (WHO). Fire- related burns were responsible for an estimate of 3, 22,000 deaths in the world (WHO), and 95% of these deaths occurred in low- and middle – income countries. In developmental countries, open fires in households are extremely common and constitute a predominant cause, as do inadequately developed workplace safety regulations. It is in fact difficult to find reliable data regarding the true incidence of burns in different countries, especially in the third world, but all available data indicate that the incidence is considerably higher in developing than in developed countries and that the types of burn problems also differ.

According to American Burn Association (national Burn Repository 2015), globally the Survival Rate after burn injury is 96.9%, in which 68% are Male, 32% Are Female. Considering Ethnicity 59% Caucasian, 20% African – American, 14% Hispanic, 7% other. The Admission cause is 43% Fire / Flame, 34% Scald, 9% Contact, 4% Electrical, 3% Chemical, 7% Other. The Place of occurrence is 73% Home, 8% Occupational , 5% Street / Highway, 5% Recreational / Sport, 9% Others.

A study conducted on epidemiology and mortality of hospitalized burn patient in Kohkiluye Va Boyerahmad province (Iran) in 2002 – 2004 concluded that 149 (63.4%) were accidental and 86(36.6%) were self-inflicted burns. The hospitalization rates for accidental and self-inflicted burns were 12.1 and 7.0 per 100,000 person – years respectively. A prospective study conducted among Asian patients of 50 consecutive admissions in the burns unit and concluded that quality of life has been decreased among accidental post burns comparing before injury.

The Union Health Ministry of WHO reports India records 70 lakhs burn injury cases annually of which 1.4lakhs people die of burn every year. Around 70% of all

burn injuries occur in most productive age group (15 – 35 years). Around four out of five burnt cases are women and children. As many as 80% of cases admitted are a result of accidents at home (kitchen – relation incidents). The high risk for females is associated with open fire cooking or inherently unsafe cook stoves, which can ignite loose clothing. Among all traumas, burn cases have highest duration of hospital bed occupancy. Cost of hospitalized burn injury case management is extremely high which may cost enormous financial burden to the country. The rehabilitation of the individual may be a challenging and daunting task. **(The Times of India – 2016).**

In state Level (Tamilnadu), many accidental burns have occurred in 200, At Ramanathapuram, 25 mentally ill persons were killed in a devastating fire accident which swept across a private home for mentally – ill at Erwadi. In 2004 Kumbakonam school fire accident happened in Kumbakonam Town of Tanjore district. A total of 94 students of the primary section of the Krishna English Medium School were burnt to death in their classroom as the thatched roof caught fire. More recently, a report released by "The Indian Express (2012)"on the tragic forest fire at Kurangani hills in Theni. The fire turned in to a disaster as 36 trekkers were struck on the mountains.36 persons were trapped and 19 persons lost their lives in the trekking expedition, due to the devastating forest fire in the hills.

The Hindu reports (2017), a study by Kilpauk medical college that since January of 2017, the plastic surgery department of the hospital has treated 50 persons of electrical burns. Among those, 44 persons were victims of high voltage electricity and 10 sustained injuries dealing with low voltage supply. Seven patients were women and 8 children. Most of the fatalities were owing to injuries sustained while handling electrical equipment or accidentally coming in contact with high tension wires while working. The victims were from Chennai, chengalpattu, North and Sout Arcot

Vellore, Dharmapuri and neighbouring areas. The injuries occurred when electrical staff workers climbed on transformers without safeguards. Dr. Jayaraman of the hospital reported that the hospital has treated 1409 patients including 54 patients who suffered electrical burn injuries.

In Madurai at Rajaji Hospital, the year of 2017, there are 285 suicidal burns and 355 accidental burns been reported. 264 male patients were treated for thermal burns and 14 male patients were treated for electrical burn. 441 female patients were treated for the thermal burns and 1 electrical burn were treated. According to the age, 21 – 30 years was the majority affected wherein 104 male patients and 210 female patients have sustained accidental burns.

Quality of life initially lower in burn patients compared to general population but it improves over a period of many years. The disability in burn patients found that 79% of the patients were able to return to work or school, 45 % required a change in work and 25% were not able to continue with their peer group in school. In addition, the traumatic nature of the burn accident and the painful treatment may induce psychopathological responses. The rationale behind the current study was to evaluate the quality of life that the patients with burns sustain as an after math of the psychological trauma they undergo following disfigurement and disability out of burns and the assessment of factors affecting quality of life in burn patients.

The physical, psychological and psychosocial manifestations may compromise the quality of life of burned patients. Emotional problems and the severity of the burn are important factors that can impair the quality of life over time. Thus Assessing quality of life in burn patients has many implications as it might affect the treatment compliance and causes overall poor quality of life. This study emphasizes that there must be more awareness and sensitization among health care providers need of

assessing quality of life in post – burn patients which may help in their rehabilitation. A critical factor in the successful or unsuccessful life adjustment of the badly burned patients in his family's reaction to his chronic problem , their ability to support and help him to pursue the long course of treatment and also to help him to adjust in the social world. So, it is vital to deal effectively in the sustained manner to assess the type of emotional disturbances which exists in these families at very higher rate.

(Maria Elena Echevarría, 2016)

1.2 Statement of the Problem

A study to assess the quality of life among accidental post burn patients attending plastic surgery OPD at Govt Rajaji Hospital, Madurai 20.

1.3 Objectives

1. To assess the Quality of life among accidental post burn patients attending plastic surgery OPD at Govt Rajaji Hospital, Madurai 20.
2. To compare the quality of life among male and female accidental post burn patients attending plastic surgery OPD at Govt Rajaji Hospital, Madurai 20.
3. To associate the quality of life among male and female accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai and their selected socio demographic and baseline variables.

1.4 Hypotheses

H_1- There is a statistically significant difference between quality of life among male and female accidental post burn patients attending plastic surgery OPD at Government Rajaji hospital, Madurai-20.

H_2- There is a statistically significant association between quality of life among male and female accidental post burn patients attending plastic surgery OPD at

Government Rajaji hospital and their selected socio demographic and baseline variables.

1.5 Operational Definition

Quality of Life

In this study quality of life refers to each post burn patient's perception of their physical, psychological, social and environmental domains such as affect, heat sensitivity, hand function, treatment regimens, work, sexuality, interpersonal relationship, simple abilities, body image in order to manage the way of life which is being measured by Burn specific health scale-Brief.

Accidental Post Burn Patients

In this study accidental post burn patient refers to burns caused by thermal, electrical, chemical or scald in different sites, percentage and various degree of burns exposed by the patients without their knowledge.

Plastic Surgery OPD

In this study plastic surgery OPD refers to planning and follow up of reconstructive and cosmetic surgery .In an average 60-70 patients are attending OPD per day, among them approximately 6-8 accidental post burn patients attended for reconstructive surgery.

1.6 Assumption

- Burns patients have physical, emotional, social or environmental problems or disturbances.
- Post burn patients perceive their quality of life in different manner.

1.7 Delimitation

This study is limited to

- Accidental post burn patients attending plastic surgery OPD, Govt Rajaji Hospital, Madurai-20
- The period of data collection is limited to 4- 6 weeks.

1.8 Projected Outcome

- The study helps to identify the quality of life among male and female accidental post burns.

REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITERATURE

Researchers generally undertake a literature search to familiarize themselves with a knowledge base. A review of related literature is an integrate component of any scientific approach. It involves a systematic identification, location, scrutiny and summary of written materials that contain information on a research problem.

A review of literature helps to assess what is already known, what is still unknown and untested, justify the need for its replication throw some light on the feasibility of the study and problems that may be encountered. It also helps to involve promising methodological tools, which sheds light on ways to improve the efficiency of data collection and obtain useful information on how to increase the effectiveness of data analysis.

The overall process of review of literature is to develop a strong knowledge base to carry out research and other scholarly educational and clinical practice activities. It helps to determine the gaps consistencies and inconsistencies in the literature about the particular subject under study.

The related literature is reviewed from the published and unpublished articles and Medline and internet search to broaden the understanding and insight in to the selected problem under the study. This review of literature is a broad overview of studies, which are organized chronologically and arranged under the following sections.

Review of literature is discussed under following headings:

1. Literature review related to prevalence of accidental burns
2. Literature review related to quality of life after accidental burns.

2.1. Literature review related to prevalence of accidental burns

Chirag Bhanshali A et al., (2017) conducted an epidemiological, cohort review on burn injuries and its mortality risk factors in a tertiary care hospital, Maharashtra with 3179 patients. The study revealed that the mean age of patients was 28 years (SD=14.7 years) and overall male to female ratio was 0.6. The percent of Total body surface area for burned patients ranged between 1% and 100% and maximum number of patients were admitted with 30 to 50 % burns (27.5%) The median hospital stay was 5 days. There was a significant association between Total body surface area burns and hospital stay (P<0.001). 7.3% patients were discharged from the hospital after successful treatment. 1733 (54.51%) deaths were recorded. Death rate was higher amongst females as compared to males. Mortality rate was highest in age group of 12–26 years. Moreover, there was a significant correlation between Total body surface area burns and mortality (P<0.001).

Hosseinei S N et al.,(2017) conducted an epidemiological study on burns in Zanjan city, in northwest Iran. The medical files of 2,590 thermal burn patients treated from December 2010 to November 2016 were studied. The study revealed that about 65% of the patients were male (n=1691). Most burns (92.8%) were less than 30% total body surface area. Mean age and hospital stay were 25.4 years old and 9.1 days, respectively. The most common causes of burn were hot liquids, gas explosion and fire, respectively. Except for self-immolation, which was more common among men, there was no significant relationship between cause of burn and the studied variables. The study concluded that the six-year mortality rate was 2.9%, and was more common in the years 2011 to 2013. Chemical burns, gas explosion burns and burn mortality increased. Some of these results were due to economic and pharmaceutical

sanctions in Iran. Thus, due to Iran's industrial development, it is recommended that preventive measures for chemical, gas and electrical burns be conducted.

Ashok Gupta K et al., (2017) conducted a meta analytical study to analyze the cause, demographic, sociocultural aspects and the magnitude of burn injuries prospectively in ICU of tertiary care hospital at Punjab, India. Samples were selected by consecutive method. About 892 burn patients admitted over a period of 6 years were selected. As per the survey report, 54% patients were males. Majority of the patients 79%, were in the age group of 15-45 years. 72% patients sustained flame burns, while 17% and 7% sustained electrical and scald burns respectively. A total of 53% patients sustained major 2^{nd} to 3^{rd} degree flame burns involving more than 45% of total body surface area. Further the study reveals that the mortality rate was 40% i.e.357 patients died of burns and its related problems. About 72% sustained burns in closed space of which 52% sustained burns in kitchen. The study concludes that developing country like India need an aggressive public education program so that people become more literate about various etiological factors causing burns and means of preventing them.

Jefferson Lessa et al., (2017) conducted a study to analyze the incidence, characteristics, behaviour and mortality rate of patients with injury by burns in Adabil, Iran. Prospective design was used and samples were consecutively selected. 15 cases were studied. The study revealed that 66.7% of cases were women. In most cases they were poor. The mortality rate was 40%. The average burned body surface was 38.7 ± 26.1%. Alcohol was used by 66.7% of patients to cause the burns. The average duration of treatment was 20.1 ± 14.8 days. Burned patients had more extensive lesions, remained in hospital for longer periods and had worse prognosis. The study concludes that patients with burns had a mean higher age, higher burned

body surface, longer hospitalization, more infectious complications and higher mortality rate than patients with accidental burns

Sharma B R et al., (2017) conducted an epidemiological retrospective study to assess the accidental burn injuries in Indian kitchen in Chandigarh, India. The reports of 617 cases of burn injuries subjected to medico-legal autopsy revealed that victims have been cooking on kerosene oil stove at the time of the alleged accident. The 21 to 30 years age group accounted for 56% of the cases and male: female ratio was 1: 4. The most common cause of death in these cases was septicaemia, while in 26% of the cases, 51 to 60% of the total body surface area (TBSA) was involved. Majority of the females sustained burns in the early evening, between 6 – 7.30 PM (34%); in their in-law's house, (61%), and belonged to a lower socioeconomic strata having an income of < 10,000 INR per month, (76%). Whereas, majority of the males sustained burns in the afternoon (1.30 – 4.30 PM) or early evening (6 – 7.30 PM), 19% cases each and at their work places, 53% cases. The study concludes that trends of gender based burn injuries speak for themselves and demand for a comprehensive review of the laws relating such incidents.

Anneri myburgh.,(2016) conducted a study on prevalence and community reintegration of patients with post burn injuries in the north west province, brazil, south Africa. Purposive method was used and 73 patients were selected. The study concludes that, most post burn injury patients were from lower socio-economic class, 68.5% and 77.4% of the patients were male with a mean age of 38.4 and 41.4 years respectively and 80% of the participants came from rural areas. Fewer than 50% of these participants were employed. The average length of stay for adult patients with a mean TBSA of 23%, of whom 50% had full thickness injuries, is 68 days (range 1–

161 days), while 50% percent of the burns injuries were on the trunk, face and upper limbs, with open flame being the most common cause of burn injury in adults.

Arshi S and Sadeghi Bazargani H., (2016) conducted a longitudinal prospective study to investigate features of burns in rural areas of Ardabil Province. Using purposive sampling technique 1179 cases were studied. The study reveals that most of the cases (59.4%) were females. Mean of age of victims was 22.3 ± 19 years in females and 13.6 ± 17 years in males. The vast majority (91.2%) of burns occurred at home. More than two-thirds of burns were because of hot liquids or steam. The majority of scald burns resulted during use of heating devices such as samovars, gas stoves, *valors* and picnic gas stoves. Overturning and spilling of hot liquids were the most common injury mechanisms.The study concludes that prevention programs should focus on children and adult women. Prevention efforts should target home environments and focus on prevention of scalding burns.

Padma Bhate Deosthali and Lakshmi Lingam.,(2016) conducted a retrospective study to assess the gendered pattern of burn injuries-as a neglected health issue using the medical records in urban areas and a verbal autopsy-based sample survey for rural populations in Hyderabad, India. The study revealed that burn-related injuries and death show a gendered pattern, with young women aged 18-35 being the most affected. The vehicle of burns is kerosene, and burns occur mostly in kitchens. The burn outcomes for women are poor. Surprisingly, the study concludes that 91,000 of these deaths are women, a figure higher than that for maternal mortality. Women of child bearing age are on average three times more likely than men to die of burn injuries. Hence, it is important to assess how kitchen safety can be improved, and how the family and community can be made accountable for safety in

homes. Important steps would be to create awareness about safety measures in kitchens.

Wanjeri and Joseph Kimani.,(2015) conducted a case control study on risk factors for burn injuries among patients hospitalized at Kenya national and referral hospital in Nairobi. 202 patients admitted with burns and the controls were 202 non-surgical patients admitted into the paediatric and medical wards. The study revealed that burn injuries were found to be commonest in children within the 0-4 years age bracket (42.6%).The male: female ratio was found to be 1:1 and the risk factors found to be significant for burn injuries were; low level of education, use of kerosene for cooking (p=0.001) and lack of knowledge of burn injury prevention and fire safety (p=0.000). The study concluded that low level of education, use of kerosene for cooking and lack of knowledge of burn injury prevention and fire safety were identified as risk factors for burn injury and the recommendation from this research is that these risk factors be addressed through implementation of burn injury prevention programs and that they should be the basis for policy change or advocacy for fire and burn injury prevention programs.

Mostafa Sadat.,(2015) conducted a study on epidemiology and mortality of hospitalized burn patients in kohkiluye Va Boyerahmad province (Iran).235 burn patients were selected by convenient method. The study revealed that 149 (63.4%) burn patients were accidental and 86 (36.6%) were self-inflicted. The hospitalization rates for accidental and self-inflicted burns were 12.1 and 7.0 per 100,000 person years. The study concludes that there is a significant difference in the sex ratio (male: female) between accidental (1:40) and suicidal (0:13).The fatality rates were 2.1% and 59.5%,mortality rates about 0.24 and 3.81 per 100,000 per person years. The mean and median age ages for accidental patients were 19.4 and 13 years. The

majority of accidental burns were caused by scalds (43.2%) and most of the burns occurred at home.

Delilah Noronha O and Jan Faust.,(2013) conducted a meta analytical study to identify and evaluate variables that have the greatest impact on psychological adjustment after burn injury among children, adolescents, and young adults.13 articles were utilized in the study. The study concludes that the body location variable (.26) had the greatest mean strength of association in relation to psychological adjustment. The burn injury variable (.21) had the second greatest mean strength of association. Finally, both the parental adjustment variable and the child premorbid psychological functioning variable (.15) had the third greatest mean strength of association. The study revealed that a major implication of this research is that the impact variables identified will be useful in targeting burn patients who are at risk for psychological adjustment problems.

Michael Peck., (2012) conducted a study on epidemiology of burns throughout the world. The study revealed that, India has a particularly high rate of burns in young women. Most burns were caused by fire and scald ranging from 3% to 10% and average proportion of the total body surface burnt is approximately 20%.The study concludes that the overall mortality rate is 65% worldwide.

2.2 Literature review related to quality of life after accidental burns

Fazia Shahid M.,(2017) conducted a cross sectional study on assessment of quality of life among accidental post burns at peshwar, Pakistan using consecutive sampling, which revealed that demographic characteristics and socioeconomic are prognostic risk factors associated with burn related injuries. The mean age of the sample was 17.08 years. The most frequent cause of burns was scald followed by flame. Female proportion was high (56%) and were significantly sustained scald and

flame burn, whereas, male was observed by electric (84.2%) and contact burns (78.3%). The upper limbs was most commonly affected (11–20%) TBSA burned in 36.4% patients and 71.6% sustained partial thickness and mixed deep thickness. Majority of the incidence take place at home (88.4%). Majority reported moderate to severe problem. The depth and extent %TBSA burn and post burn period have negative impact on health dimensions. It revealed that quality of life was compromised in majority of post burn patients. Several demographic characteristics and clinical parameters related burns were important risk factors in assessment of quality of life in burn sustained patient

Prerna Malik et al.,(2017) conducted a cross sectional study to assess quality of life and factors affecting it in patients with burn injury, By consecutive method, 70 burn patients at Patiala were studied. The study concluded that majority of the patients were females and most of these were house wives. Further, they did not differ significantly ($p > 0.05$) for marital status and education status. Moreover, majority of patients were in age group of 20-39 years and their mean age did not differ significantly ($p > 0.05$). This suggests that the burn injuries are more common in reproductive age group. Most of the patients (60%) had burns that were thermal in nature, the cause of burn injury was mostly related to stove accidents (40%).Majority of the patients (66.67%) have burn injury involving the face with other parts of the body. The study concludes that quality of life was poor in burn injured patients and was affected by severity of burn injury. The study concludes that the quality of life following burns must be assessed at every stage of their treatment for better adjustment.

Wasiak J.,(2017) conducted a study to prospectively measure the changes in health related quality of life. Using convenient sampling 114 adults were taken and

measured at 3, 6 and 12 months of post-burn. The study revealed that in 12 months post-injury, female patients showed overall poorer physical ($p = 0.01$) and mental health status ($p < 0.001$), greater psychological distress ($p < 0.001$), and greater difficulty with aspects of burn-specific health related quality of life, body image ($p < 0.001$), affect ($p < 0.001$), interpersonal functioning ($p = 0.005$), heat sensitivity ($p = 0.01$) and treatment regime ($p = 0.01$). While significant interaction effects suggested that female patients had more improvement in difficulties with treatment regimen ($p = 0.007$), female patients continued to report greater difficulty with multiple aspects of physical and psychosocial health status 12 months post-injury. The study concludes that Urgent clinical and research attention utilising an evidence-based research framework, which incorporates the use of larger sample sizes, the use of validated instruments to measure appropriate outcomes, and a commitment to monitoring long-term care, can only improve burn-care.

Maria Elena et al., (2016) conducted a longitudinal study on assessment of health-related quality of life in the first year after burn. Study participants were 73 individuals (18 women and 55 men) .The study concludes that mean age of 35.2 years (SD: 12.9), 35 (45.2%) had completed high school and 24 (32.9%) had incomplete first degree .The average TBSA was 17% (SD: 12.44), and 75% of subjects had less than 20% TBSA. Among the etiologic agents, alcohol and flammable products appeared in 46 cases (63.7%), burns by electricity in 12 (16.4%) and the overheated liquid in nine (12.3%). Most of the accidents occurred at home (n = 40; 58.4%). The most affected body areas were upper limbs (n = 62; 84.9%) and torso (n = 49; 67.1%), but many of the participants had more than one area of the body burnt. Findings revealed that there was an improvement in the perception of quality of life in Role physical and Role emotional. The study revealed that patients reported worse quality

of life at an early phase and improvement in a late phase, mainly in the domains of Role physical and Role emotional, among men. The visible scars represented negative rating in the late phase.

Nitesh Tirumala et al., (2016) conducted a prospective observational study assessment of quality of life in Thermal (flame) burn patients at Warangal.143 patients (54 Males and 89 Females) with mean age of 30.73±12.02 years were studied. 78.32% were married, 17% were unmarried and 5% were divorced/ widowed. Unequal number of patients came from urban (20.27%) and rural (79.72%) backgrounds. The main alleged cause of burn injury among the patients was intentional (58.7%) and followed by accidental (41.20%). The main accelerant of burn injury frequently reported was kerosene (75%) The average percentage of TBSA in total population was found to be 49.43±28.00, whereas mean %TBSA burned in male was 38.98±25.93 and in female was 55.76±27.43 Most of the patients 28% had burns to upper limbs, followed by trunk was 26%. Mortality was found to be 39.86%.The study revealed that quality of life is compressed in burn patients.

Altier.,(2015) conducted a cross-sectional study to assess the psychological functioning and quality of life in burned patients as compared to unburned matched subjects. 49 adult patients in burn sample. 82% male. Mean TBSA 35%. Mean 64 months post-burn. 22% of burn patients with T-score ≥ 63 on General Severity Index as compared to 12% of controls. On the SF-36, burn patients scored lower on all 8 subscales, suggesting poorer health (none significant, likely due to small sample size).

Cromes.,(2015) conducted a prospective cohort study to examine the quality of life during the 1st year after burn injury and identify predictors. 110 adult patients at 2 months, 97 (88% follow-up) at 6 months, 69 (63% follow-up) at 12 months were selected by purposive method. The study revealed that, mean TBSA is 24%.

Moreover, physical domain improved significantly from 2 – 6 months, then stabilized and the total, general, social and psychological domain scores did not change over time.

Moi A L and Heisterkamp H.,(2014) conducted a prospective study to examine burn patient health status, quality of life and work status of 95 adult burn patients at Norwegian. The age of 53.4 (9.4): mean (SD), total body surface burn: 17.8% [12.7%]; full thickness injury: 4.4% [5.1%]). At follow up 11.5 years later, the perceived burn-specific and generic health remained unchanged, whereas overall quality of life had improved significantly (quality of life score 77.2 (10.2) vs. 73.1 (12.1), p=0.003), with the largest improvements in the items related to satisfaction with helping others, work, physical active pastimes and independence. The results indicate that self-perceived functioning and wellbeing expressed by burn-specific and generic health status remain stable after the first years post injury. The improvement in overall quality of life 16.2 years post injury suggests long-term processes of growth.

Akhilesh Jain and Rakesh Jain., (2009) conducted a prospective study on depression and quality of life in burn patients seeking reconstruction surgery. The sample comprised of 60 patients. Depression was found statistically significant in burn patients as compared to control. 28.33%-mild, 25%-moderate, 23.33%-severe, and 15%-moderately severe as compared to control, where 86.67% of study sample had no features of depression ($P < 0.001$). The overall quality of life was found significantly lower (32.75 ± 10.33 vs. 69.44 ± 10.87) ($P < 0.001$). The study concludes that the high prevalence of clinically significant depression and lower QOL and their relationship with body image suggest the importance of the routine psychological screening seeking reconstruction surgeries.

2.3 Conceptual framework

The conceptual framework for the present study was based on **"Ferran et al's** health related quality of life.The determinants explored the characteristics and the baseline variable of an individual and the characteristics of environment influencing the injury. It also depicts the physical, emotional/behavioural symptoms of an individual after a injury. It also determines the functional status which includes the instrumental activity of daily living and interpersonal interactions. The present study was focused on quality of life after accidental burns based upon a model developed by **Ferran et al's** and explored determinants of quality of life. Persons who have encountered accidental burns perceived their quality of life in different way in context with the altered physical, psychological, social and environmental domains.

Individual determinants

It is composed of cultural and behavioural patterns and lifelong personal habits that have developed through process of socialization or social interaction with parents, peer groups, friends and siblings and through school and mass media.

In this present study individual with accidental post burn determinants are marital status, type of family, income, nature of burns, total body surface area burnt, degree of burns, site being affected and the post burn period.

Symptoms

- **Physical symptoms**

They are merely tangible evidence of what is going on in unconscious mind. In this present study physical symptoms in an accidental post burn include ability to perform daily simple activity, skin sensitive to changing of climate and discomfort due to contractures.

- **Emotions / Behaviours**

Each individual has own set of emotions and behaviours that is enduring. Any conscious experience characterized by intense mental activity and a certain degree of pleasure or displeasure is emotion. It can be a subjective experience, cognitive processes, expressive behaviour, psycho physiological changes, and instrumental behaviour.

In this present study it includes feeling of lonliness, worries about scars and general appearance, having hard time in taking care of skin, worries on not able to work in the hot weather.

Functional status

Functional status is an individual's ability to perform normal daily activities required to meet basic needs, fulfil usual roles, and maintain health and well being. It subsumes related concept of interest: functional capacity and functional performance. It involves instrumental activity of daily living and interpersonal interactions.

- **Instrumental activity of daily living:**

Instrumental activity of daily living is an individual living independently in a community based on their finance, study, work and leisure time activities.

In this present study Instrumental activity of daily living among accidental post burns identified are burn injury/scars interfering with the ability to perform previous work/duties, getting a new job, can't able to spend time freely with their family/friends as like before, financial problem due to loss of job.

- **Interpersonal interactions:**

It is the process by which people exchange information, feelings, and meaning through verbal and non-verbal messages to others by the way of face to

face communication or indirectly to maintain interpersonal interaction , harmonious relationship and social support.

In this study Interpersonal interaction problems among accidental post burn patients are not communicating with others, can't able to go to job due to burns scar in the way of they are reacting differently ,away from the family, lack of moral support from spouse, decreased interest in sexual life leading to conflicts between spouse and loss of their social support.

Environmental determinants

It is an established fact that environment has a direct impact on the physical, mental and social well -being of those living in it. The internal environment of man pertains to "each and every component part, every tissue, organ and organ- system and their harmonious functioning within the system". The external or macro environment consists of those things which man is exposed after conception. It can be divided into physical, biological and psychological components, any or all of which can affect the health of man and his susceptibility to illness.

In this present study environmental determinants which influence the quality of life after accidental burns are more sensitive to changing of climate, societal reaction, problems in social reintegration.

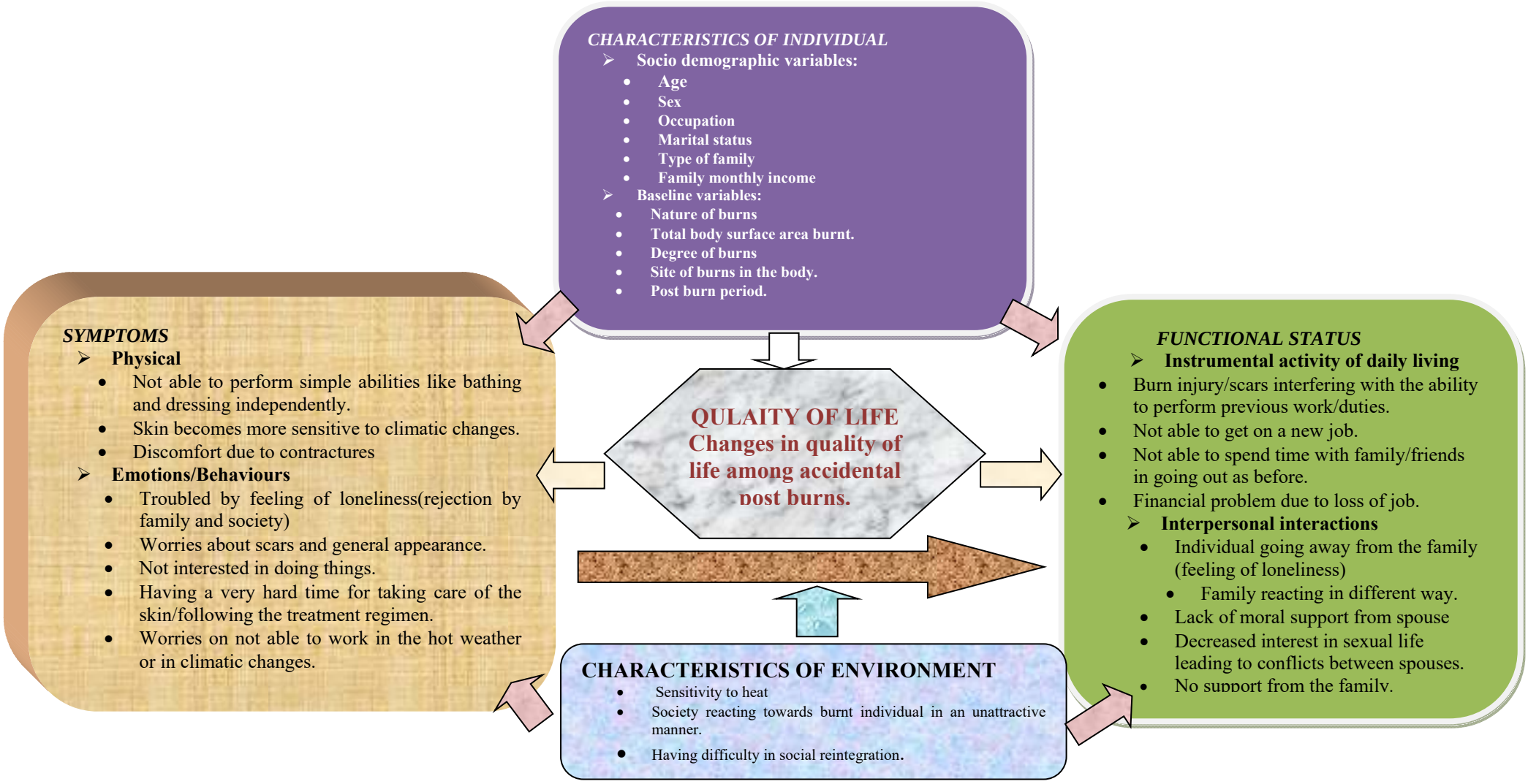


Figure:1 Modified conceptual framework based on Ferran et al's health related quality of life in the context of burns (1996)

METHODOLOGY

CHAPTER - III

RESEARCH METHODOLOGY

The methodology of research indicates the general pattern of developing or refining the methods of obtaining, organizing or analyzing data for gathering valid and reliable data for investigation. This chapter includes research design, setting of the study, population, sample, and inclusion and exclusion criteria for selection of sample, development and description of the tool, content validity, pilot study, data collection procedure and plan for data analysis.

3.1 Research approach:

The research approach is the most essential part of any research. The entire study is based on it. A research approach tells the researcher about the collection of data that is what to collect, when to collect, how to collect and how to analyze. It also helps the researcher with suggestions of possible conclusions to be drawn from the data.

According to Polit and Hungler (1999) evaluative research is an applied format research that involves finding out how well a program, practice, procedure or policy is working. It involves the collection and analysis of information relating to the functioning of a program or procedure.

In this study, the investigator used quantitative evaluative approach which was aimed to assess the quality of life among accidental post burn patients.

3.2 Research design:

According to Kothari.C.R.(2003) "A research design is defined as the overall plan for collecting and analyzing data, including a specification for enhancing the internal and external validity of the study "The research design is the plan, structure

and strategy of investigations of answering the research question. It is the overall plan or blueprint the researcher select to carry out the study.

The research design used in this study was Non experimental (Descriptive research) design

3.3 Variables:

The variable is "an attribute of a person or object that varies that is taken different values" **- Polit and Hunger**

Research variables:

The research variable in the present study was quality of life among accidental post burns.

3.4 Setting of the study

The setting is the physical location and condition in which data collection takes place in the study. **- Polit and Hunger.**

The setting was selected based on acquaintance of the investigator with the institution, feasibility of conducting the study, availability of the sample, permission and proximity of the setting for investigation. The study was conducted in plastic surgery OPD, Government Rajaji Hospital, Madurai. It is the second largest Govt. medical college hospital in Tamil Nadu. It has all specialty departments.

3.5 Population:

The population is defined as the entire aggregation of cases that meet a designed criterion.

Target population

Target population of the study was accidental post burn patients.

Accessible population

The accessible population of the study comprises of accidental post burn patients attending plastic surgery OPD at Govt Rajaji Hospital, Madurai.

3.6 Sample

In the present study the sample consist of accidental post burn patients attending plastic surgery OPD, Govt Rajaji Hospital, Madurai who met the inclusion criteria.

3.7 Sample size

The sample size was 100 accidental post burns patients attending plastic surgery OPD.

3.8 Sampling technique

Sampling Technique used in the study was Non probability (consecutive) sampling technique.

3.9 Criteria for selection of sample:

The study sample was selected by the following inclusion and exclusion criteria.

Inclusion Criteria:

- After one month exposure to accidental burns.

Exclusion criteria:

- Self-immolation burn patients.
- Patients with known psychiatric illness or chronic medical illness.

3.10 Research tool and technique

- The tool used for the study was Burn specific health scale-brief.
- The technique used for the study was structured interview method.

Description of the instrument

The tool consists of three sections.

Section I: Socio Demographic variables.

Section II: Baseline variables

Section III: Burn specific health scale-Brief

Section I (Socio demographic variables)

It consists of socio demographic data of the clients. The socio demographic variables include age, sex, area of residence, educational status, occupation, family monthly income, type of family, marital status

Section II (Baseline variables)

It includes nature of burns, total body surface area burnt, site of burns in the body, degree of burn injury, site of occurrence, cause of burns, post burn period.

Section III (Burn specific health scale-Brief)

The burn specific health scale-brief is a standardized scale which consists of 40 items covering all the domains such as physical, psychological, social, environmental (heat sensitivity, affect, hand function, treatment regimens, work, sexuality, interpersonal relationships, simple abilities, and body image) and designed as a brief structured interview tool developed by Blades et al to ascertain the quality of life among post burn patients.

3.11 Scoring procedure

Section A: No scoring was given for the socio demographic variables of the accidental post burn patients attending plastic surgery OPD.

Section B: No scoring was given for the baseline variables of the accidental post burn patients attending plastic surgery OPD.

Section C: The Burn specific health scale -Brief takes 15–30 minutes for structured interview method. Responses are made on a 5 point scale from 0 (extreme (ly)) to 4 (none/not at all) for each of the 40 items. Questions 1-3 denotes simple abilities domain, Question 4-8 denotes hand function domain, Questions 9,38-40 denotes Work domain, Questions 10-16 denotes affect domain, Questions 17-20 Interpersonal relationship domain, Question 21-23 denotes sexuality domain, Questions 24-27 denotes Body image domain, Question 28-32 denotes Heat sensitivity domain and Questions 33-37 denotes Treatment regimen domain

Interpretation of score

Minimum Score=0

Maximum Score=160

Score	**Level**
< 40	Poor
40 -80	Average
81 -120	Good
121 – 160	Very good level

3.12 Testing of the tool

Validity of the tool

"Validity is the degree to which an instrument measures what is intended to measure " **(Polit and Hungler. 1995)**

In order to measure the content validity, the questionnaire was given to experts in the field of Psychiatric Nursing, Psychiatrist and Psychologist. They were judge the items for clarity, relatedness, meaningfulness and adequacy of the contents. Tool was translated in to Tamil and retranslated to English to confirm language validity.

Reliability of the tool

The reliability of a measuring instrument is a major criterion for assessing its quality and adequacy. Reliability is the consistency with which it measures the target attribute. The reliability of the tool was done by test retest method r= 0.83. Hence the tool was consider as reliable and was used in this study.

3.13 Pilot study

A Pilot study was conducted in plastic surgery OPD at Government Rajaji Hospital, Madurai to test the feasibility, relevance and practicability of the tool. A formal permission was obtained from the head of the department of plastic surgery for pilot study .Study was conducted from 21st May 2018 to 27th May 2018 among 10 accidental post burn patients who attended plastic surgery OPD for regular follow up (dressing, reconstructive surgery, disability certificate). The findings of the pilot study revealed that the tool was feasible and practicable.

3.14 Data collection procedure

The data collection was done in plastic surgery OPD at Government Rajaji Hospital, Madurai, prior to data collection ethical clearance was obtained from Ethical committee of Government Rajaji Hospital, Madurai, and HOD of plastic surgery department to conduct the main study. Both verbal and written informed consent was obtained from all the study participants. Data collection was done for six weeks from 4/6/18 to 13/7/18 in plastic surgery OPD, Government Rajaji Hospital Madurai. Session started with introduction of self, establishment of rapport, explanation regarding the purpose and nature of the study. Approximately per week 15 accidental post burn patients was selected by Non probability (consecutive) sampling and assessed through burn specific health scale-brief tool. All questions were administered and rated in 5 point likert scale for ascertaining the quality of life

among accidental post burns. Totally 100 samples were collected till the required sample was achieved.

3.15 Plan for data analysis

The data was analyzed according to objectives of the study by using descriptive and inferential statistics.

Descriptive statistics

Frequency and percentage was used for analyzing socio demographic and baseline variables.

Inferential statistics

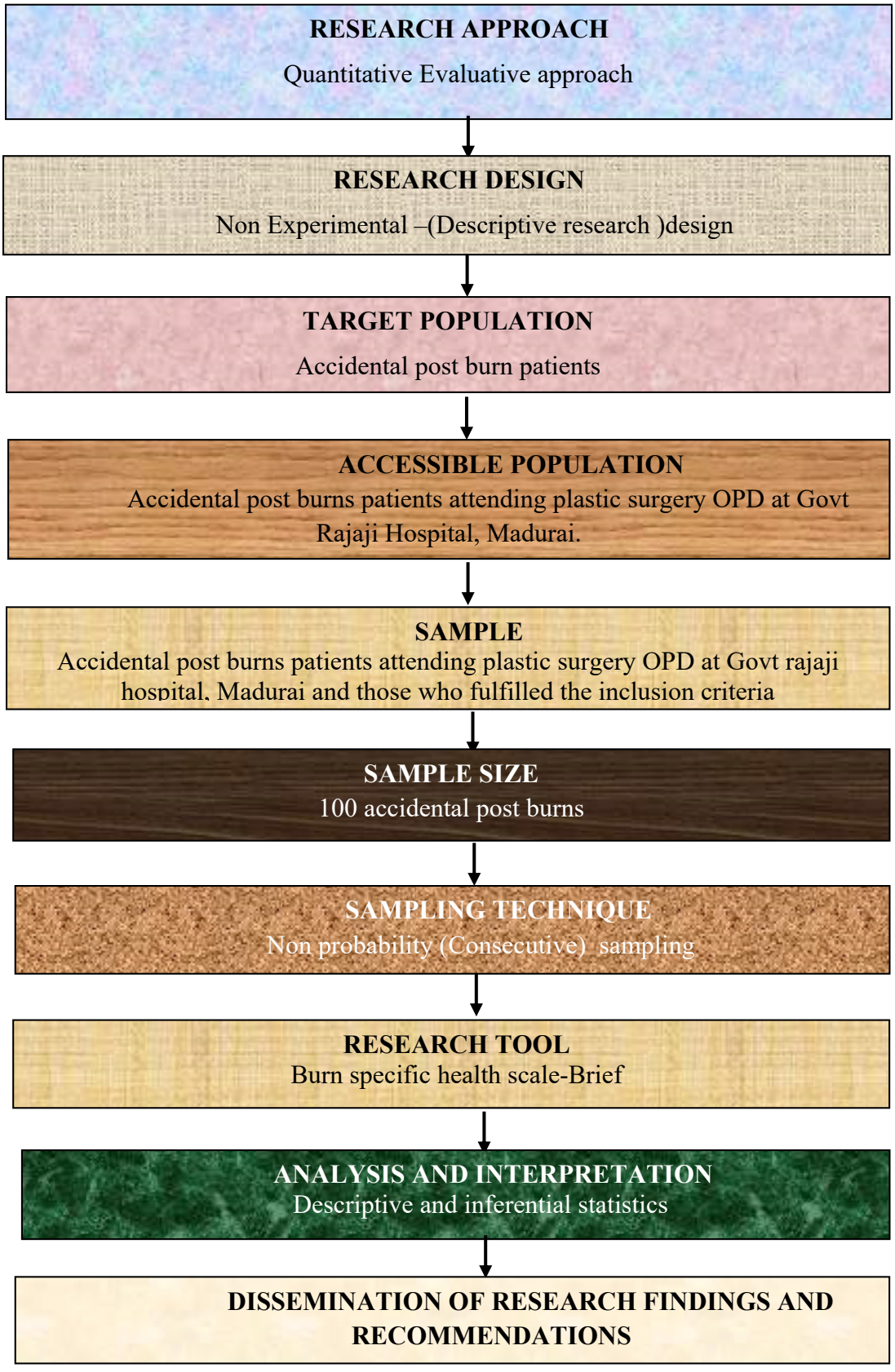
The comparison of quality of life among male and female accidental post burn patients was calculated using mean difference and independent t test. Chi- square analysis was used to find out the association between quality of life among accidental post burn patients with their selected socio demographic and baseline variables.

3.16 Protection of human rights

The research proposal was approved by the Ethical committee, Head of the department of plastic surgery to conduct the main study.

- Both verbal and written informed consent was obtained from all the study participants and the data collection was kept confidential.
- They were also explained that they may withdraw from the study at any time without any penalty.
- Anonymity and confidentiality was maintained throughout the study

3.17 SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY



DATA ANALYSIS AND INTERPRETATION

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the description of sample, analysis and interpretation of the of the data collected to evaluate the achievement of the objectives of the study. Statistical procedure enabled the investigator to deduce, summarize, organize, evaluate, interpret and communicate the numeric information. Statistical analysis is a method of rendering quantitative information meaningful and intelligible. In this chapter the data collected were edited, tabulated, analyzed and interpreted. The findings were organized and presented in the following orderly sections.

The data collected were organized under the following sections

Section I

Distribution of accidental post burn patients according to their selected socio demographic and baseline variables.

Section II

Comparison between the Quality of life among male and female accidental post burn patients.

Section III

Association between the Quality of life among male accidental post burn patients and their selected socio demographic and baseline variables.

Section IV

Association between the Quality of life among female accidental post burn patients and their selected socio demographic and baseline variables.

Section I

Distribution of accidental post burn patients according to their selected socio demographic and baseline variables.

Table 1

Frequency and percentage distribution of subjects according to their selected socio demographic variables.

n=100

Socio Demographic variables		Sex				χ^2
		Male(n=50)		Female(n=50)		
		f	%	f	%	
Age	< 25 yrs	10	20.00%	14	28.00%	**χ^2=11.42**
	26-35yrs	10	20.00%	20	40.00%	**P=0.01**(S)**
	36-44yrs	16	32.00%	13	26.00%	
	>55yrs	14	28.00%	3	6.00%	
Area of Residence	Rural	24	48.00%	22	44.00%	χ^2=1.08
	Suburban	22	44.00%	26	52.00%	P=0.58(NS)
	Urban	4	8.00%	2	4.00%	
Education	No formal education	8	16.00%	10	20.00%	χ^2=1.78 P=0.77(NS)
	Primary Education	27	54.00%	27	54.00%	
	High school education	11	22.00%	7	14.00%	
	Higher secondary	2	4.00%	4	8.00%	
	Graduate and above	2	4.00%	2	4.00%	
Occupation	Private employee	14	28.00%	4	8.00%	**χ^2=12.13**
	Government employee	0	0.00%	0	0.00%	**P=0.01**(S)**
	Coolie	15	30.00%	11	22.00%	
	Self-employment	6	12.00%	4	8.00%	
	Unemployed	15	30.00%	31	62.00%	

Family monthly income	<Rs.2000	4	8.00%	6	12.00%	$\chi 2=2.57$
	Rs.2001-5000	16	32.00%	22	44.00%	P=0.28(NS)
	>Rs. 5000	30	60.00%	22	44.00%	
Type of family	Nuclear	37	74.00%	39	78.00%	$\chi 2=4.25$
	Joint family	9	18.00%	11	22.00%	P=0.11(NS
	Extended family	4	8.00%	0	0.00%	
Marital status	Married	30	60.00%	29	58.00%	$\chi 2=3.12$
	Unmarried	20	40.00%	18	36.00%	P=0.21(NS)
	Widow/widower	0	0.00%	3	6.00%	
	Divorced	0	0.00%	0	0.00%	

Table 1 explains the distribution of subjects according to their selected socio demographic variables.

According to the age group in male accidental post burn patients, majority 16 (32.00%) belonged to the age group between 36-44 years.14 (28.00%) were above 55 years,10 (20.00%) were below 25 years and 10 (10.00%) belonged to the age group between 26-35 years. Whereas in female accidental post burn patients, majority 20 (40.00%) belonged to the age group between 26-35 yrs, 14 (28.00%) were below 25 yrs, 13 (26.00%) belonged to the age group between 36-44 yrs and 3 (6.00%) were above 55 years.

As far as area of residence, in male accidental post burn patients, majority 24 (48.00%) hailed from rural, 22 (44.00%) hailed from suburban and 4 (8.00%) hailed from urban .Whereas in female accidental post burn patients majority, 26 (52.00%) hailed from suburban, 22 (44.0%) hailed from rural and 2 (4.00%) hailed from urban.

When discussing educational status, in male accidental post burn patients majority 27 (54.00%) studied up to primary education, 11(22.00%) studied up to high school education, 8 (16.00%) had no formal education, 2 (4.00%) studied up to higher

secondary and 2 (4.00%) were graduate and above whereas in female accidental post burn patients, majority 27 (54.00%) studied up to primary education,10 (20.00%) had no formal education, 7 (14.00%) studied up to high school education, 4 (8.00%) studied up to higher secondary and 2 (4.00%) were graduate and above.

While stating occupation in male accidental post burn patients, majority 15 (30.00%) were coolie 15 (30.00%) were unemployed, 14 (28.00%) were private employee and 6 (12.00%) were self-employed. Whereas in female accidental post burn patients, majority 31 (62.00%) were unemployed, 11 (22.00%) were coolie, 4 (8.00%) were private employee and 4 (8.00%) were self-employed.

While comparing family monthly income in male accidental post burn patients, majority 30 (60.00%) earned more than Rs.5000,16 (32.00%) earned between Rs.2001-5000 and 4 (8.00%) earned less than Rs.2000.Whereas in female accidental post burn patients, majority 22 (44.00%) earned between Rs.2001-Rs.5000, 22 (44.00%) earned more than Rs.5000 and 6 (12.00%) earned less than Rs.2000 per month.

With respect to type of family in the male accidental post burn patients, majority 37 (74.00%) hailed from nuclear family, 9 (18.00%) hailed from joint family and 4 (8.00%) hailed from extended family. Whereas in female accidental post burn patients, majority 39 (78.00%) hailed from nuclear family, 11 (22.00%) hailed from joint family and none of them were from extended family.

With respect to marital status in male accidental post burn patients, majority 30 (60.00%) were married, 20 (40.00%) were unmarried and none of them were separated, divorced or widower. Whereas in female accidental post burn patients, majority 29 (58.00%) were married, 18 (36.00%) were unmarried, 3 (6.00%) were widow and none of them were divorced or separated.

Distribution of subjects according to age

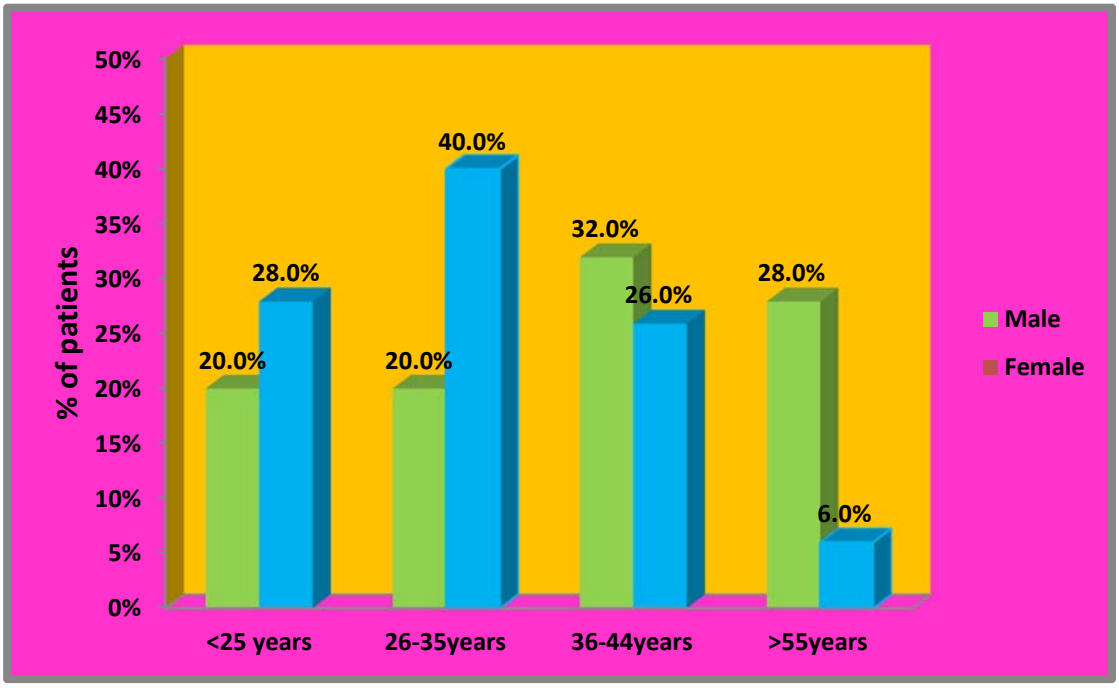


Figure 2: Multiple Bar diagram quotes distribution of accidental post burn patients according to their Age (in years).

The above bar diagram quotes distribution of accidental post burn patients according to the age group in male accidental post burn patients, majority 16 (32.00%) belonged to the age group between 36-44 years.14 (28.00%) were above 55 years,10 (20.00%) were below 25 years and 10 (10.00%) belonged to the age group between 26-35 years. Whereas in female accidental post burn patients, majority 20 (40.00%) belonged to the age group between 26-35 yrs, 14 (28.00%) were below 25 yrs, 13 (26.00%) belonged to the age group between 36-44 yrs and 3 (6.00%) were above 55 years.

Distribution of subjects according to area of residence

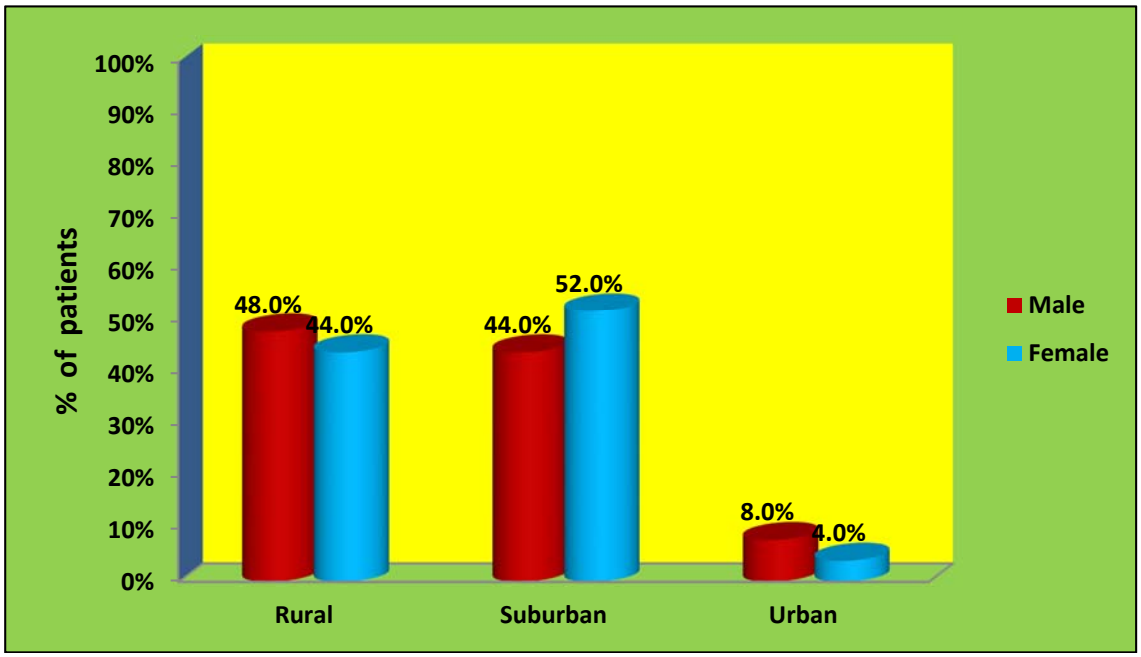


Figure 3: Multiple cylinder diagram quotes distribution of accidental post burn patients according to their area of residence.

The above cylinder diagram comparing area of residence in the male accidental post burn patients, majority 24 (48.00%) hailed from rural, 22 (44.00%) hailed from suburban and 4 (8.00%) hailed from urban .Whereas in female accidental post burn patients majority, 26 (52.00%) hailed from suburban, 22 (44.0%) hailed from rural and 2 (4.00%) hailed from urban.

Distribution of subjects according to educational status

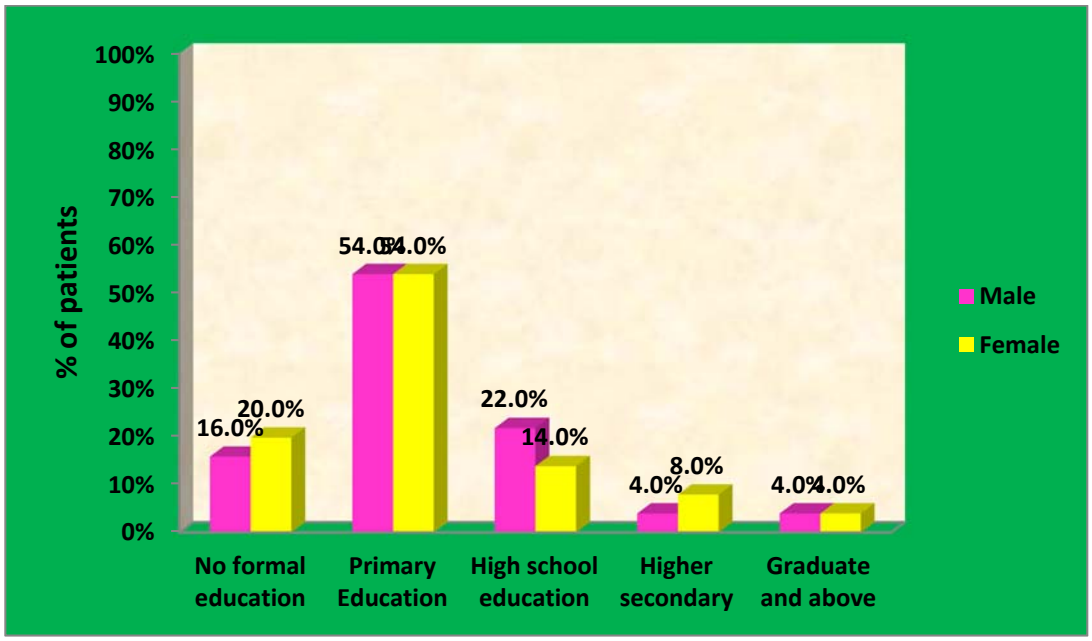


Figure 4: Clustered column diagram discussing accidental post burn patients according to their educational status.

The above clustered column diagram discussing educational status in male accidental post burn patients , majority 27 (54.00%) studied up to primary education, 11(22.00%) studied up to high school education, 8 (16.00%) had no formal education,2 (4.00%) studied up to higher secondary and 2 (4.00%) were graduate and above whereas in female accidental post burn patients, majority 27 (54.00%) studied up to primary education,10 (20.00%) had no formal education,7 (14.00%) studied up to high school education,4 (8.00%) studied up to higher secondary and 2 (4.00%) were graduate and above.

Distribution of subjects according to occupational status

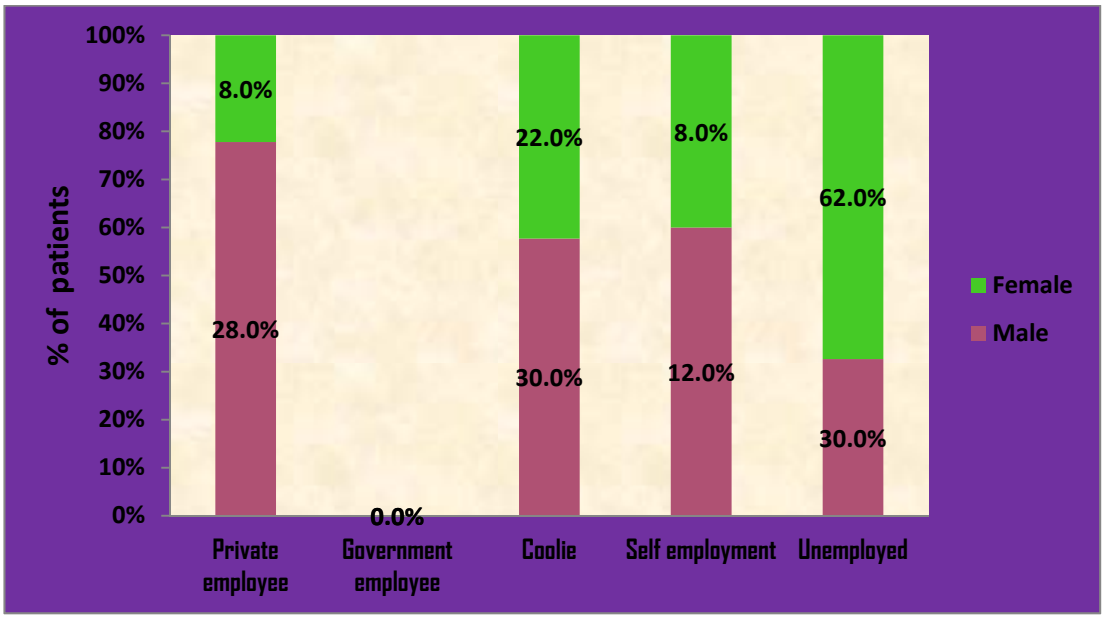


Figure 5: Stacked column diagram stating the distribution of accidental post burn patients according to their occupational status.

The above stacked column diagram stating occupational status in male accidental post burn patients, majority 15 (30.00%) were coolie 15 (30.00%) were unemployed, 14 (28.00%) were private employee and 6 (12.00%) were self employed. Whereas in female accidental post burn patients, majority 31 (62.00%) were unemployed, 11 (22.00%) were coolie, 4 (8.00%) were private employee and 4 (8.00%) were self employed.

Distribution of subjects according to family monthly income

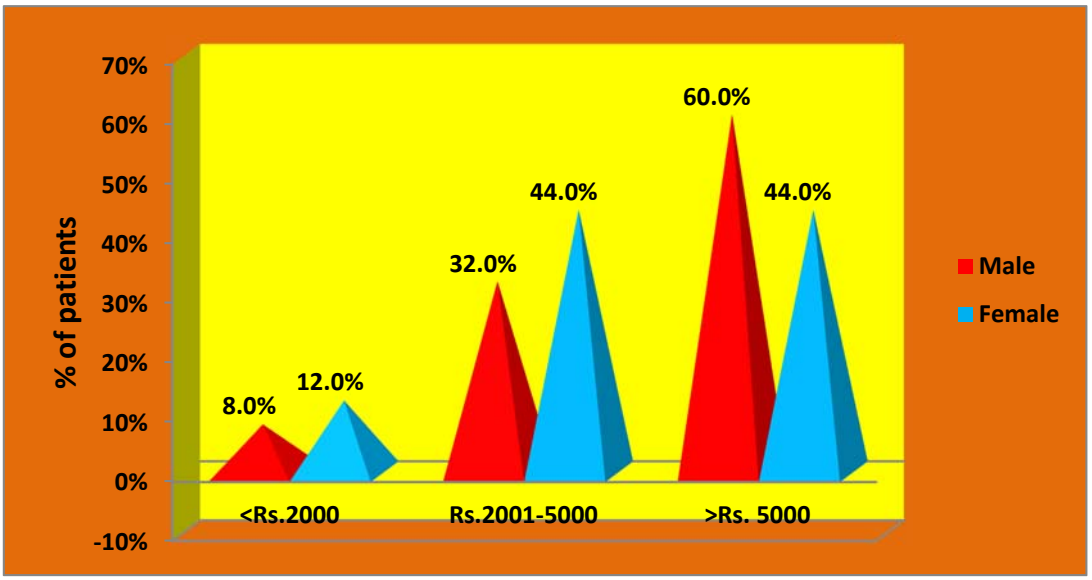


Figure 6: Pyramid diagram comparing the distribution of accidental post burn patients according to their family monthly income.

The above pyramid diagram comparing family monthly income in male accidental post burn patients, majority 30 (60.00%) earned more than Rs.5000,16 (32.00%) earned between Rs.2001-5000 and 4 (8.00%) earned less than Rs.2000.Whereas in female accidental post burn patients, majority 22 (44.00%) earned between Rs.2001-Rs.5000, 22 (44.00%) earned more than Rs.5000 and 6 (12.00%) earned less than Rs.2000 per month.

Distribution of subjects according to type of family

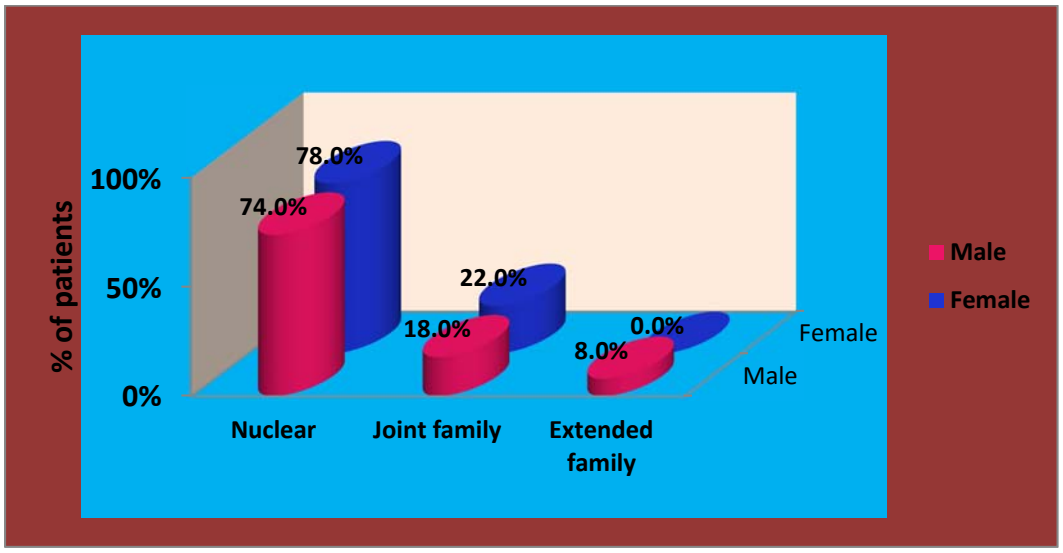


Figure 7: Cylinder diagram quotes the distribution of accidental post burn patients according to their type of family.

The above cylinder diagram with respect to type of family in the male accidental post burn patients, majority 37 (74.00%) hailed from nuclear family, 9 (18.00%) hailed from joint family and 4 (8.00%) hailed from extended family. Whereas in female accidental post burn patients, majority 39 (78.00%) hailed from nuclear family, 11 (22.00%) hailed from joint family and none of them were from extended family.

Distribution of subjects according to marital status

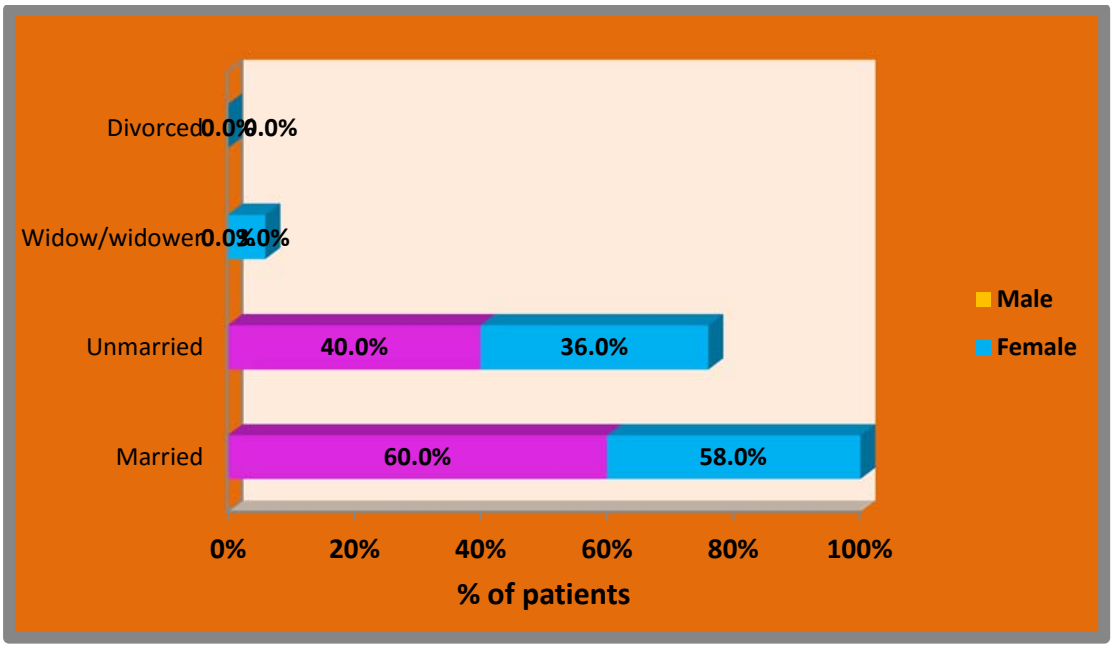


Figure 8: Bar diagram considering the distribution of accidental post burn patients according to their marital status.

The above bar diagram considering marital status in male accidental post burn patients, majority 30 (60.00%) were married, 20 (40.00%) were unmarried and none of them were separated, divorced or widower. Whereas in female accidental post burn patients, majority 29 (58.00%) were married, 18 (36.00%) were unmarried, 3 (6.00%) were widow and none of them were divorced or separated.

Table 2: Frequency and percentage distribution of subjects according to their baseline variables.

n=100

Baseline variables		Sex				χ^2
		Male(n=50)		Female(n=50)		
		f	%	f	%	
Nature of burns	Thermal burn	19	38.00%	29	58.00%	**χ^2=11.19**
	Electrical burn	14	28.00%	2	4.00%	**P=0.01**(S)**
	Chemical burn	0	0.00%	0	0.00%	
	Scald	17	34.00%	19	38.00%	
Total Body Surface Area of the burn	<50%	40	80.00%	46	92.00%	χ^2=2.99
	> 50%	10	20.00%	4	8.00%	P=0.08(NS)
Site of burns in the body	Head/face	2	4.00%	2	4.00%	χ^2=9.60
	Neck	2	4.00%	2	4.00%	P=0.14(NS)
	Upper arm	17	34.00%	10	20.00%	
	Trunk	2	4.00%	6	12.00%	
	Chest	7	14.00%	2	4.00%	
	Lower limbs	2	4.00%	7	14.00%	
	Multiple sites	18	36.00%	21	42.00%	
Degree of burns	1st degree	4	8.00%	8	16.00%	χ^2=6.99
	2nd degree	14	28.00%	21	42.00%	P=0.07(NS)
	3rd degree	2	4.00%	4	8.00%	
	Mixed degree	30	60.00%	17	34.00%	
Place of occurrence	Home	26	52.00%	42	84.00%	**χ^2=11.77**
	Work area	24	48.00%	8	16.00%	**P=0.001***(S)**
	Forest/Hills	0	0.00%	0	0.00%	
	Hospital/shelter home	0	0.00%	0	0.00%	
Cause of burns	Kerosene	11	22.00%	21	42.00%	**χ^2=13.12**
	Crackers	6	12.00%	6	12.00%	**P=0.05*(S)**
	Hot liquids	16	32.00%	16	32.00%	
	Petrol	6	12.00%	0	0.00%	
	Oil	7	14.00%	7	14.00%	
	Acids/chemicals	4	8.00%	0	0.00%	
	Gas stove	0	0.00%	0	0.00%	
Post burn period	<1 year	35	70.00%	27	54.00%	χ^2=3.05
	1-3 years	7	14.00%	13	26.00%	P=0.22(NS)
	>3 years	8	16.00%	10	20.00%	

Table 2 explains the distribution of subjects according to their baseline variables.

While denoting the nature of burns in male accidental post burn patients, majority 19 (38.00%) were affected by thermal burns, 17 (34.00%) were scald, 14 (28.00%) were affected by electrical burns and none of them were affected by chemical burns. Whereas in female accidental post burn patients, majority 29 (58.00%) were affected by thermal burns, 19 (38.00%) were scald, 2 (4.00%) were affected by electrical burns and none of them were affected by chemical burns.

While depicting the total body surface area burnt in male accidental post burn patients, majority 40 (80.00%) were below 50%, 10 (20.00%) were above 50%.Whereas in female accidental post burn patients, majority 46 (92.00%) were below 50% and 4 (8.00%) were above 50% of total body surface area.

Regarding the site of burns in the body in male accidental post burn patients, majority 18 (36.00%) were burnt at multiple sites, 17 (34.00%) were burnt in upper arm, 7 (14.00%) were burnt in chest, 2(4.00%) were burnt in lower limbs, 2 (2.00%) were burnt in head/face and 2 (2.00%) were burnt in neck. Whereas in female accidental post burn patients, majority 21 (42.00%) were burnt at multiple sites, 10 (20.00%) were burnt in upper arm, 7 (14.00%) were burnt in lower limbs, 6 (12.00%) were burnt in trunk, 2 (4.00%) were burnt in head/face and 2 (4.00%) were burnt in neck.

When identifying the degree of burns in male accidental post burn patients, majority 30 (60.00%) were in mixed degree of burns, 14 (28.00%) were in 2^{nd} degree,4 (8.00%) were in 1^{st} degree and 2 (4.00%) were in 3^{rd} degree of burns. Whereas in female accidental post burn patients, majority 21 (42.00%) were in 2^{nd}

degree of burns, 17 (34.00%) were in mixed degree, 8 (16.00%) were in 1st degree and 4 (8.00%) were in 3rd degree of burns.

As far as place of occurrence in male accidental post burn patients, majority 26 (52.00%) occurred in home, 24 (48.00%) occurred at work area and none of them burns has occurred in forest/hills or Hospital/shelter homes. Whereas place of occurence in female accidental post burn patients, majority 42 (84.00%) occurred in home, 16 (8.00%) occurred at work area and none of them burns has occurred in forest/hills or Hospital/shelter homes.

While considering the cause of burns in male accidental post burn patients, majority 16 (32.00%) were due to hot liquids, 11 (22.00%) were due to kerosene/kerosene stove, 7 (14.00%) were due to oil, 6 (12.00%) were due to crackers, 6 (12.00%) were due to petrol, 4 (8.00%) were due to acids /chemicals and none of them were due to gas stove. While in female accidental post burn patients, majority 21 (42.00%) were due to kerosene, 16 (32.00%) were due to hot liquids,7 (14.00%) were due to oil, 6 (12.00%) were due to crackers and none of them were due to petrol or gas stove.

Regarding post burn period in male accidental post burn patients, majority 35 (70.00%) were had less than 1 year, 8 (16.00%) were had more than 3 yrs and 7 (14.00%) were had 1-3 years. Whereas in female accidental post burn patients, majority 27 (54.00%) were had less than 1 year, 13 (26.00%) were had 1- 3 yrs and 10 (20.00%) were had more than 3 years of post-burns.

Distribution of subjects according to nature of burns

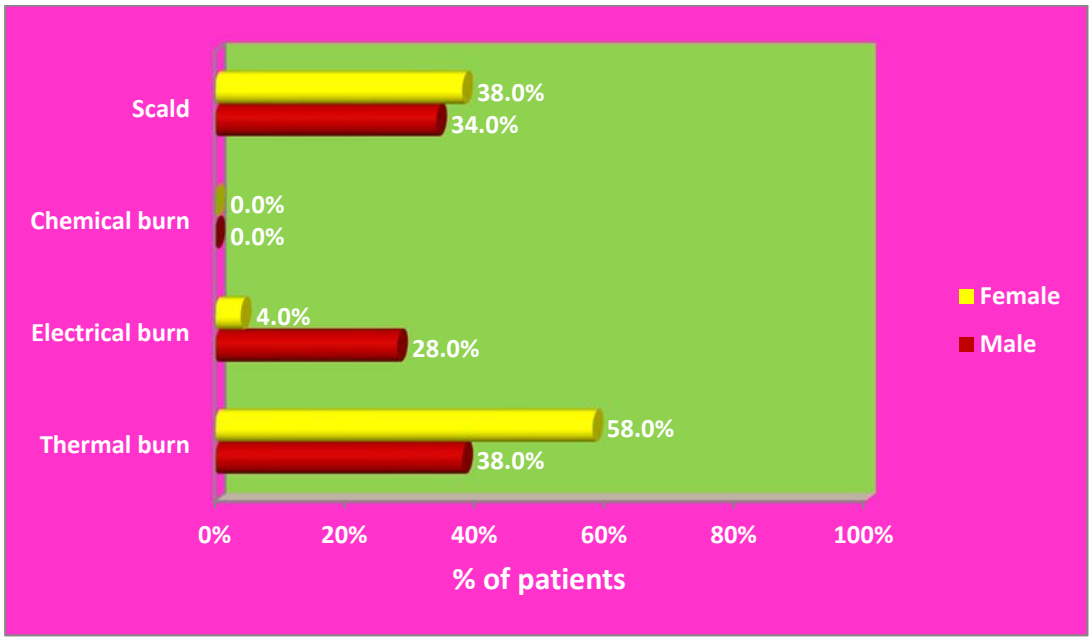


Figure 9: Horizontal Cylinder considering the distribution of accidental post burn patients according to their nature of burns

The above horizontal cylinder diagram denoting the nature of burns in male accidental post burn patients, majority 19 (38.00%) were affected by thermal burns, 17 (34.00%) were scald, 14 (28.00%) were affected by electrical burns and none of them were affected by chemical burns. Whereas in female accidental post burn patients, majority 29 (58.00%) were affected by thermal burns, 19 (38.00%) were scald, 2 (4.00%) were affected by electrical burns and none of them were affected by chemical burns.

Distribution of subjects according to total body surface area burnt

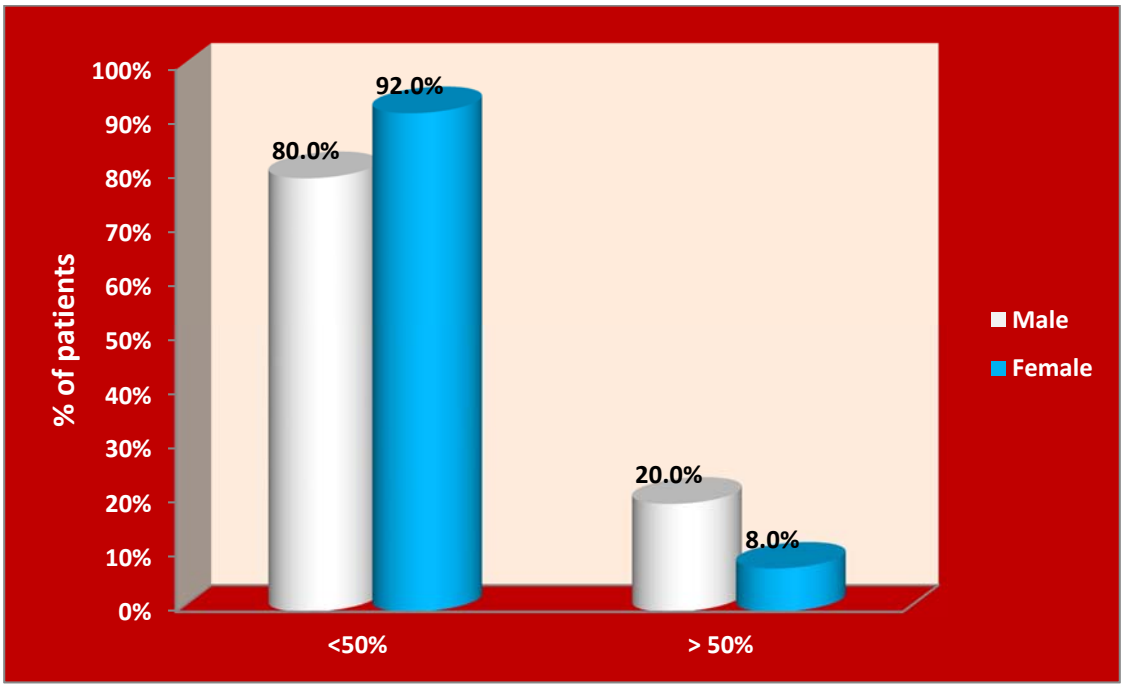


Figure 10: Multiple cylinder diagram depicting the distribution of accidental post burn patients according to their total body surface area burnt.

The above cylinder diagram depicting the total body surface area burnt in male accidental post burn patients, majority 40 (80.00%) were below 50% of total body surface area and 10 (20.00%) were above 50% of total body surface area. Whereas in female accidental post burn patients, majority 46 (92.00%) were below 50% of total body surface area and 4 (8.00%) were above 50% of total body surface area.

Distribution of subjects according to site of burns in the body

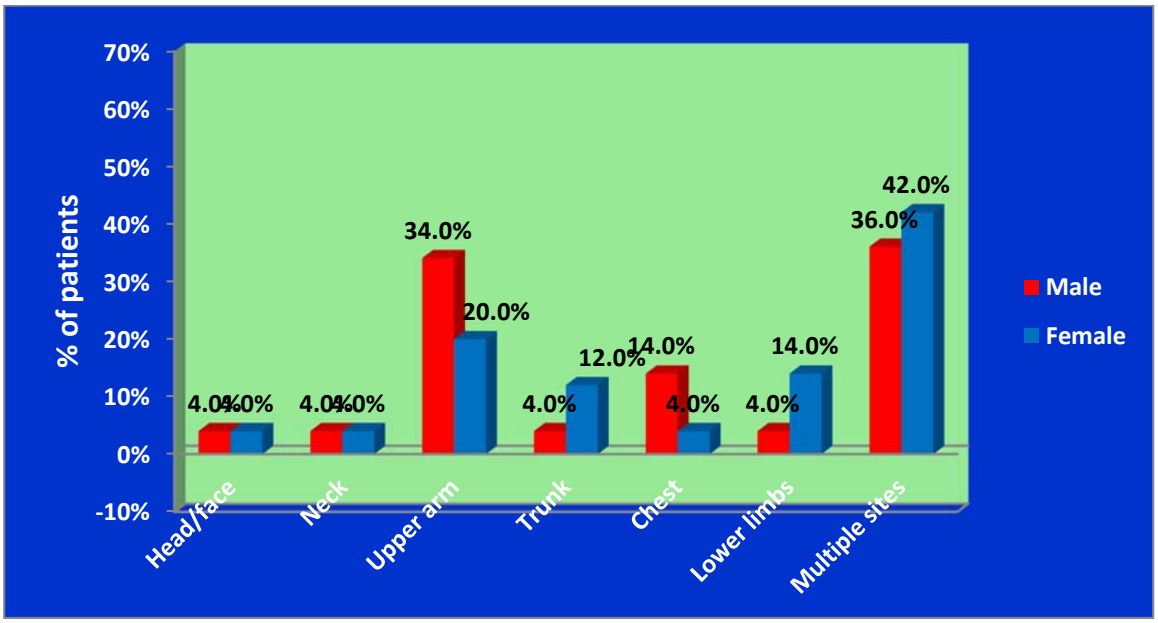


Figure 11: Column diagram regarding the distribution of accidental post burn patients according to their site of burns in the body.

The above column diagram regarding the site of burns in the body in male accidental post burn patients, majority 18 (36.00%) were burnt at multiple sites, 17 (34.00%) were burnt in upper arm, 7 (14.00%) were burnt in chest, 2 (4.00%) were burnt in lower limbs, 2 (2.00%) were burnt in head/face and 2 (2.00%) were burnt in neck. Whereas in female accidental post burn patients, majority 21 (42.00%) were burnt at multiple sites, 10 (20.00%) were burnt in upper arm, 7 (14.00%) were burnt in lower limbs, 6 (12.00%) were burnt in trunk, 2 (4.00%) were burnt in head/face and 2 (4.00%) were burnt in neck.

Distribution of subjects according to degree of burns

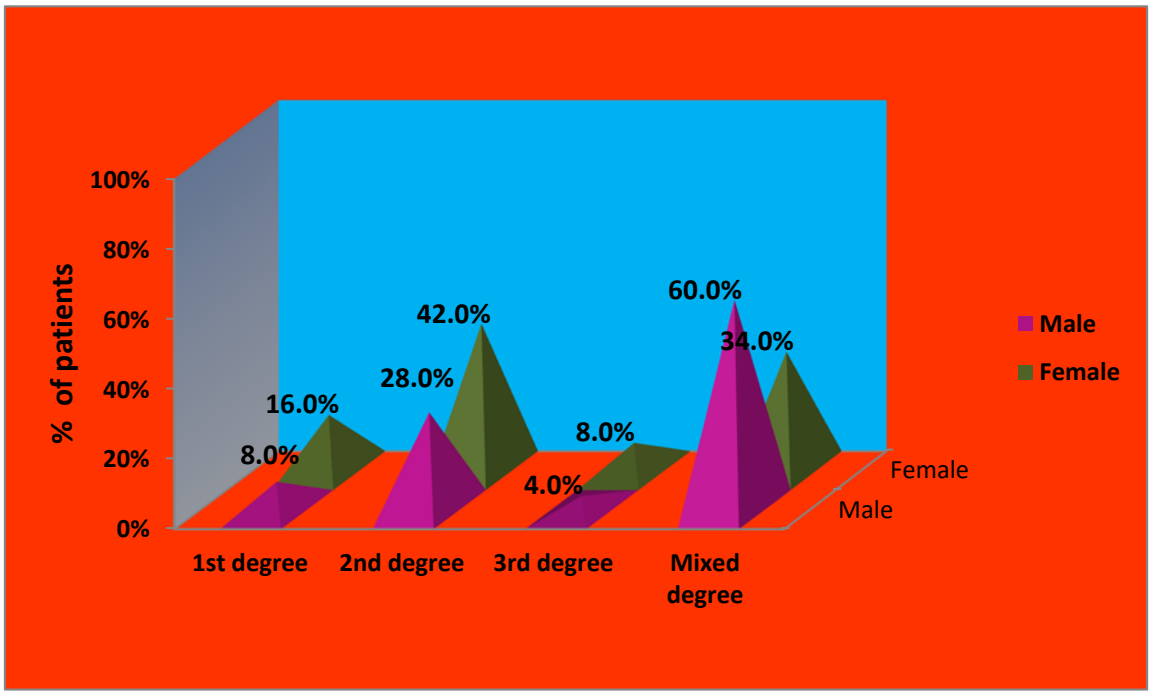


Figure 12: Pyramid diagram identifying the distribution of accidental post burn patients according to their degree of burns.

The above pyramid diagram identifying the degree of burns in male accidental post burn patients, majority 30 (60.00%) were in mixed degree of burns, 14 (28.00%) were in 2nd degree, 4 (8.00%) were in 1st degree and 2 (4.00%) were in 3rd degree of burns. Whereas in female accidental post burn patients, majority 21 (42.00%) were in 2nd degree of burns, 17 (34.00%) were in mixed degree, 8 (16.00%) were in 1st degree and 4 (8.00%) were in 3rd degree of burns.

Distribution of subjects according to place of occurrence

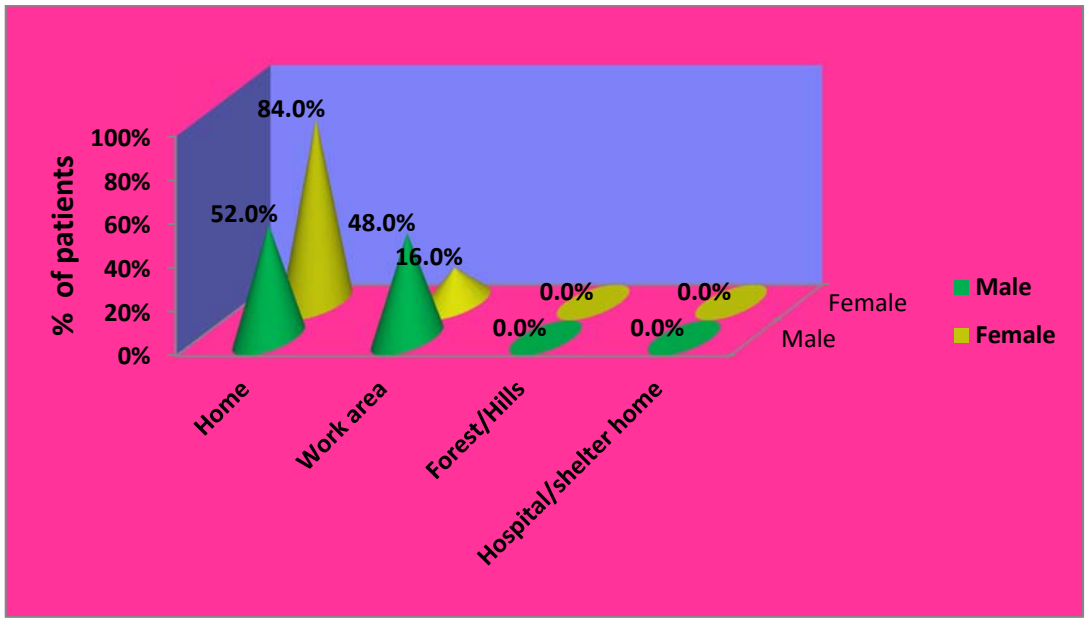


Figure 13: Cone diagram identifying the distribution of accidental post burn patients according to their place of occurrence.

The above cone diagram as far as place of occurrence in male accidental post burn patients, majority 26 (52.00%) occurred in home, 24 (48.00%) occurred at work area and none of them burns has occurred in forest/hills or Hospital/shelter homes. Whereas place of occurrence in female accidental post burn patients, majority 42 (84.00%) occurred in home, 16 (8.00%) occurred at work area and none of them burns has occurred in forest/hills or Hospital/shelter homes.

Distribution of subjects according to cause of burns

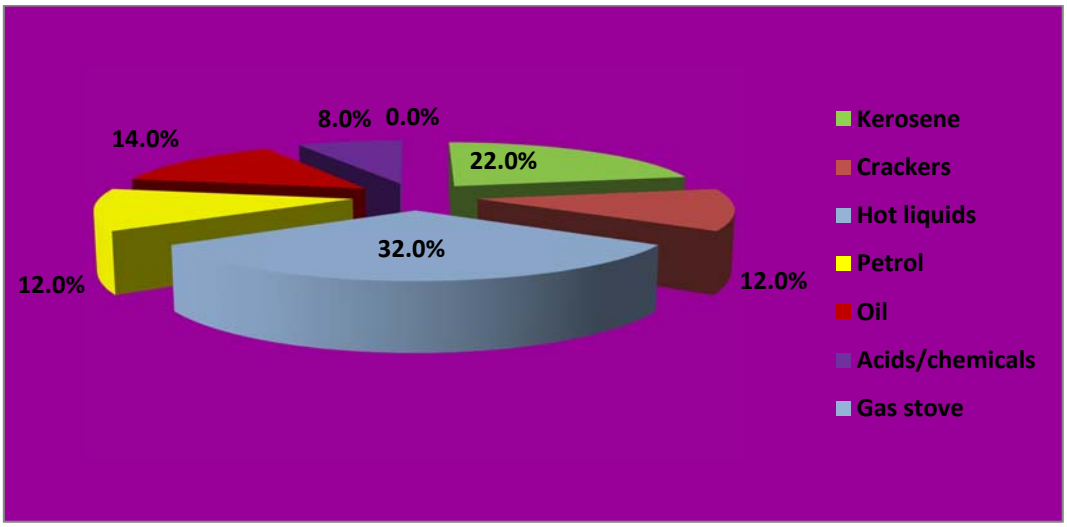


Figure 14: Pie diagram considering the distribution of accidental post burn patients according to their cause of burns.

The above pie diagram considering the cause of burns in male accidental post burn patients, majority 16 (32.00%) were due to hot liquids, 11 (22.00%) were due to kerosene/kerosene stove, 7 (14.00%) were due to oil, 6 (12.00%) were due to crackers, 6 (12.00%) were due to petrol, 4 (8.00%) were due to acids /chemicals and none of them were due to gas stove. While in female accidental post burn patients, majority 21 (42.00%) were due to kerosene, 16 (32.00%) were due to hot liquids, 7 (14.00%) were due to oil, 6 (12.00%) were due to crackers and none of them were due to petrol or gas stove.

Distribution of subjects according to post burn period

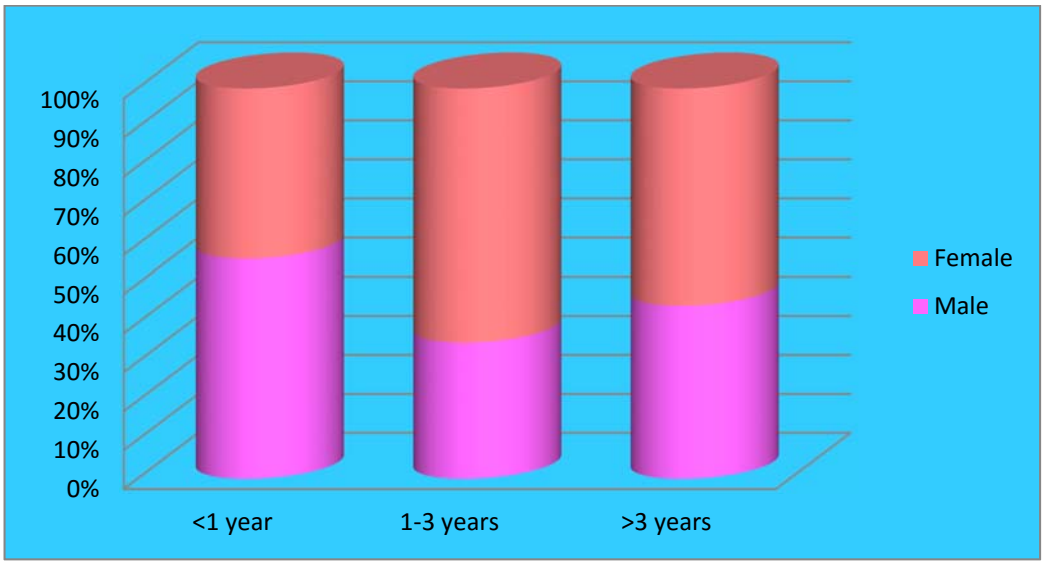


Figure 15: Cylinder diagram regarding the distribution of accidental post burn patients according to their post burn period.

The above cylinder diagram regarding post burn period in male accidental post burn patients, majority 35 (70.00%) were had less than 1 year, 8 (16.00%) were had more than 3 yrs and 7 (14.00%) were had 1-3 years. Whereas in female accidental post burn patients, majority 27 (54.00%) were had less than 1 year, 13 (26.00%) were had 1- 3 yrs and 10 (20.00%) were had more than 3 years of post-burns.

Section II

Comparison between the Quality of life among male and female accidental post burn patients.

Table 3

Frequency and percentage distribution of subjects according to their quality of life.

Quality of life	Sex				χ^2
	Male		Female		
	f	%	f	%	
Poor	0	0.00%	0	0.00%	χ^2=7.55 P=0.05*(NS)
Average	21	42.00%	9	18.00%	
Good	15	30.00%	17	34.00%	
Very good	14	28.00%	24	48.00%	
Total	**50**	**100.0%**	**50**	**100.0%**	

Considering male patients, majority 21 (42%) of them were had average quality of life, 15 (30%) of them were had good quality of life and 14 (28%) of them were had very good quality of life and none of them were had poor quality of life.

While considering female accidental post burn patients, majority 24 (48%) of them were had very good quality of life, 17 (34%) of them were had good quality of life, 9 (18%) of them were had average quality of life, and none of them were had poor quality of life. Thus female accidental post burn patients were had very good quality of life than male accidental post burn patients

Comparison between the Quality of life among male and female accidental post burn patients.

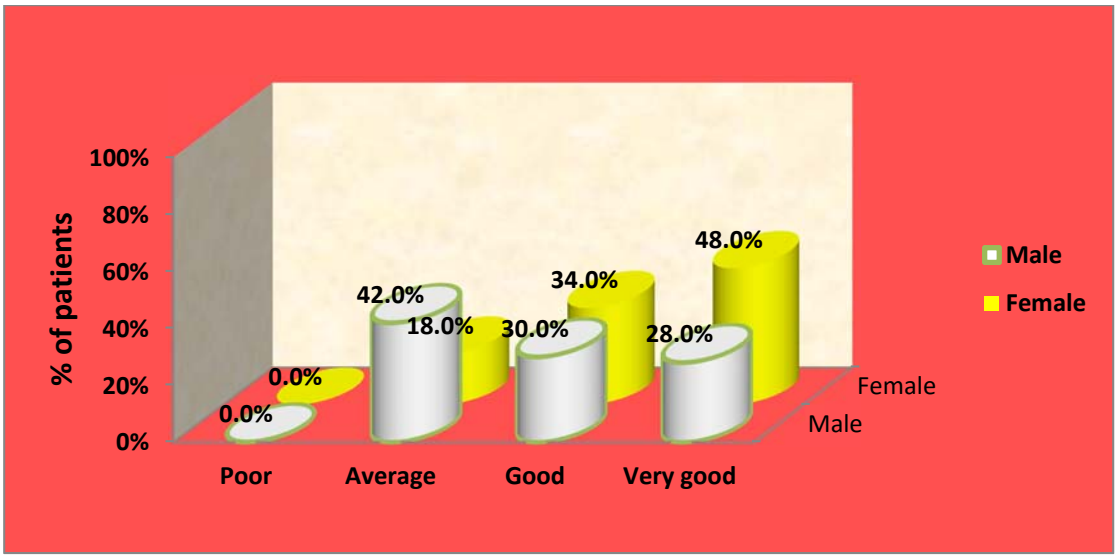


Figure 16: Cylinder diagram regarding the comparison between the Quality of life among male and female accidental post burn patients.

The above cylinder diagram depicts that among male accidental post burn patients, majority 21 (42%) of them were had average quality of life, 15 (30%) of them were had good quality of life and 14 (28%) of them were had very good quality of life and none of them were had poor quality of life.

While considering female accidental post burn patients, majority 24 (48%)of them were had very good quality of life, 17 (34%) of them were had good quality of life, 9 (18%) of them were had average quality of life, and none of them were had poor quality of life. Thus female accidental post burn patients were had very good quality of life than male accidental post burn patients

Table 4: Distribution on Quality of life among accidental post burn patients according to their domains.

n=100

Domains	Maximum score	Quality of life	
		Mean	%
Affect	28	17.10	61.07%
Heat sensitivity	20	12.74	63.70%
Hand function	20	16.36	81.80%
Treatment regimen	20	14.02	70.10%
Work	16	6.94	43.38%
Sexuality	12	8.84	73.67%
Interpersonal relationship	16	10.58	66.13%
Simple abilities	12	8.02	66.83%
Body image	16	7.66	47.88%
Total	**160**	**102.26**	**63.91%**

The above table 4 depicts the distribution on quality of life among accidental post burn patients according to their domains, the mean score 17.10 (61.07%) had disturbance in affect, the mean score 16.36 (81.80%) had disturbance in hand function, the mean score 14.02 (70.10%) had disturbance in treatment regimen , the mean score 12.74 (63.70%) had disturbance in heat sensitivity, the mean score 10.58 (66.13%) had disturbance in interpersonal relationship, the mean score 8.84 73.67% had disturbance in sexuality, the mean score 8.02 (66.83%) had disturbance in simple abilities, the mean score 7.66 (47.88%) had disturbance in body image and the mean score 6.94 (43.38%) had disturbance in work .Thus the overall quality of life mean score was 102.26 (63.91%).

Table 5: Comparison between the Quality of life among male and female accidental post burn patients according to their domains.

Domains	Maximum score	Gender							
		Male		SD	Female		SD	Mean difference	Independent t-test
		Mean	%		Mean	%			
Affect	28	15.70	7.83	7.24	18.50	66.07%	7.83	2.80	t=1.86 P=0.07 **(NS)**
Heat sensitivity	20	12.26	5.85	7.49	13.22	66.10%	5.85	0.96	t=0.71 P=0.47 (NS)
Hand function	20	14.04	3.09	6.25	18.68	93.40%	3.09	4.64	**t=4.70 P=0.001*** (S)**
Treatment regimen	20	12.32	3.40	4.43	15.72	78.60%	3.40	3.40	**t=4.30 P=0.001*** (S)**
Work	16	4.72	7.01	6.43	9.16	57.25%	7.01	4.44	**t=3.30 P=0.001*** (S)**
Sexuality	12	9.08	75.67%	3.91	8.60	71.67%	4.12	-0.48	t=0.59 P=0.55 (NS)
Interpersonal relationship	16	10.82	67.63%	1.88	10.34	64.63%	3.42	-0.48	t=0.87 P=0.39 (NS)
Simple abilities	12	7.16	59.67%	3.15	8.88	74.00%	3.89	1.72	**t=2.42 P=0.01** (S)**
Body image	16	6.76	42.25%	5.57	8.48	53.00%	6.11	1.72	t=1.47 P=0.14 (NS)
Total	**160**	**92.86**	**58.04%**	**30.51**	**111.58**	**69.74%**	**31.46**	**18.72**	**t=3.02 P=0.01** (S)**

The above table 5 reveals the comparison between the quality of life among male and female accidental post burn patients according to their domains.

In male accidental post burn patients, the mean quality of life score 15.70 with standard deviation 7.24 had major disturbance in affect and the calculated “t” value is 1.86, at (p=0.07) and the mean quality of life score 4.72 with standard deviation 6.43 had least disturbance in work and the calculated “ t” value is 3.30

(p= 0.001). While in female accidental post burn patients, the mean quality of life score 18.68 with standard deviation 3.09 had major disturbance in hand function and the calculated " t" value is 1.86 (p= 0.001) and mean score quality of life 8.48 with standard deviation 6.11 had least disturbance in body image and the calculated " t" value is 1.47 (p=0.14) . Thus on an average, female accidental post burn patients had 69.74% of quality of life score , while male patients had only 58.04% of quality of life score .Thus, there is a statistically significant difference in male and female on hand function, treatment regimen, work and simple abilities.

Comparison between the Quality of life among male and female accidental post burn patients according to their domains.

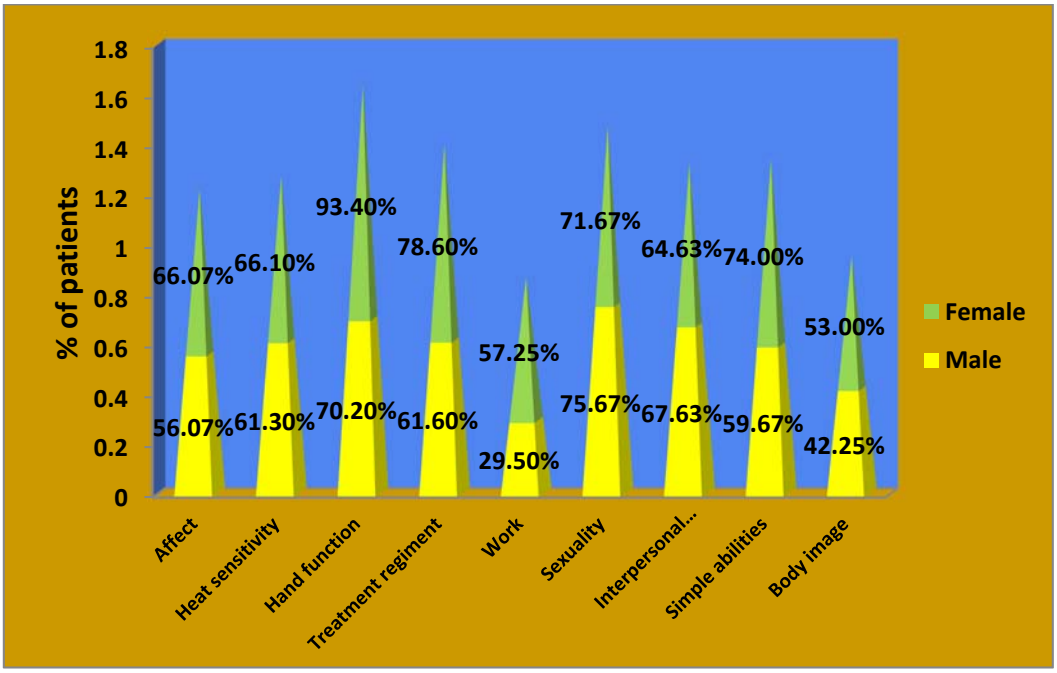


Figure 17: Pyramid diagram regarding the comparison between the Quality of life among male and female accidental post burn patients according to their domains.

The above pyramid diagram depicts that male accidental post burn patients, mean score 15.70 with standard deviation 7.24 had major disturbance in affect and the calculated "t" value is 1.86, at (p=0.07) and the mean quality of life score 4.72 with standard deviation 6.43 had least disturbance in work and the calculated " t" value is 3.30 (p= 0.001). While in female accidental post burn patients, the mean quality of life score 18.68 with standard deviation 3.09 had major disturbance in hand function and the calculated " t" value is 1.86 (p= 0.001) and mean score quality of life 8.48 with standard deviation 6.11 had least disturbance in body image and the calculated " t" value is 1.47 (p=0.14) . Thus on an average, female accidental post burn patients had 69.74% of quality of life score , while male patients had only 58.04% of quality of life score .Thus, there is a statistically significant difference in male and female on hand function, treatment regimen, work and simple abilities.

Section III

Association between the Quality of life among male accidental post burn patients with their selected socio demographic and baseline variables.

Table 6

Association between the Quality of life among male accidental post burn patients with their selected socio demographic variables.

Socio Demographic variables		Quality of life						n	χ^2
		Average Quality of life		Good quality of life		Very good quality of life			
		f	%	f	%	f	%		
Age	< 25 yrs	4	40.0%	2	20.0%	4	40.0%	10	$\chi2$=8.36 P=0.21(NS)
	26-35 yrs	6	60.0%	0	0.0%	4	40.0%	10	
	36-44 yrs	5	31.3%	7	43.8%	4	25.0%	16	
	>55 yrs	6	42.9%	6	42.9%	2	14.3%	14	
Area of Residence	Rural	5	20.8%	10	41.7%	9	37.5%	24	**$\chi2$=10.77 P=0.03*(S)**
	Suburban	14	63.6%	3	13.6%	5	22.7%	22	
	Urban	2	50.0%	2	50.0%	0	0.0%	4	
Education	No formal education	4	50.0%	3	37.5%	1	12.5%	8	**$\chi2$=15.27 P=0.05*(S)**
	Primary Education	10	37.7%	9	33.3%	8	29.6%	27	
	High school education	7	63.6%	1	9.1%	3	27.3%	11	
	Higher secondary	0	0.0%	0	0.0%	2	100.0%	2	
	Graduate and above	0	0.0%	0	0.0%	2	100.0%	2	
Occupation	Private employee	4	28.6%	4	28.6%	6	42.9%	14	$\chi2$=4.50 P=0.61(NS)
	Government employee	0	0.0%	0	0.0%	0	0.0%	0	
	Coolie	6	40.0%	5	33.3%	4	26.7%	15	
	Self employment	4	66.7%	2	33.3%	0	0.0%	6	
	Unemployed	7	46.7%	4	26.7%	4	26.7%	15	

Family monthly income	<Rs.2000	0	0.0%	2	50.0%	2	50.0%	4	$\chi 2$=4.24 P=0.37(NS)
	Rs.2001-5000	8	50.0%	3	18.8%	5	31.3%	16	
	>Rs. 5000	13	43.3%	10	33.3%	7	23.3%	30	
Type of family	Nuclear	20	54.0%	11	29.7%	6	16.2%	37	**$\chi 2$=12.73 P=0.01*(S)**
	Joint family	0	0.0%	3	33.3%	6	66.7%	9	
	Extended family	1	25.0%	1	25.0%	2	50.0%	4	
Marital status	Married	11	36.7%	11	36.7%	8	26.7%	30	$\chi 2$=1.66 P=0.43(NS)
	Unmarried	10	50.0%	4	20.0%	6	30.0%	20	
	Divorced	0	0.0%	0	0.0%	0	0.0%	0	
	Separated	0	0.0%	0	0.0%	0	0.0%	0	

The above table 6 denotes, association between the Quality of life among male accidental post burn patients with their selected socio demographic variables. Chi square test reveals that there was a significant association between the quality of life and area of residence ($\chi 2$=10.77), (P=0.03), educational status ($\chi 2$=15.27), (P=0.05), type of family ($\chi 2$=12.73), (P=0.01) at 0.05% level **(i e)** patients residing in **rural, primary education level and joint family.** Other variables were not statistically associated with the quality of life.

Association between the Quality of life among male accidental post burn patients with their selected socio demographic variables.

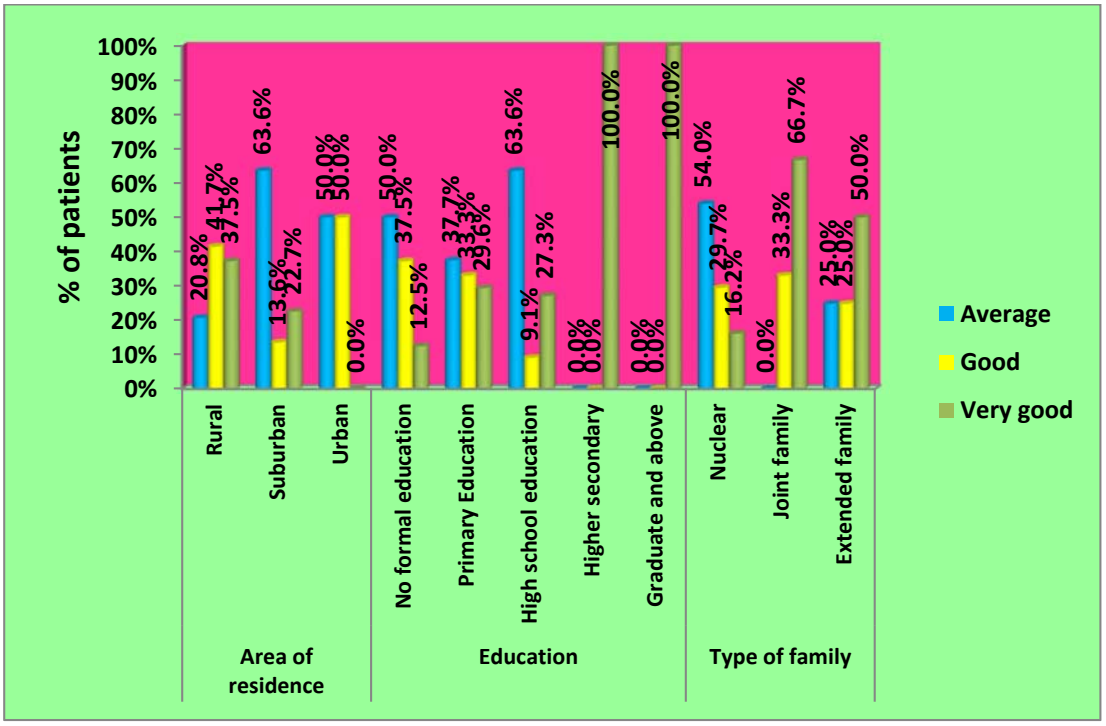


Figure 18: Cylinder diagram regarding the association between quality of life among male accidental post burn patients with their selected socio demographic variables.

Chi square test reveals that there was a significant association between the quality of life and area of residence ($\chi 2=10.77$), (P=0.03), educational status ($\chi 2=15.27$), (P=0.05), type of family ($\chi 2=12.73$), (P=0.01) at 0.05% level. **(i.e)** patients residing in **rural, primary education level and joint family.** Other variables were not statistically associated with the quality of life.

Table 7: Association between the Quality of life among male accidental post burn patients with their baseline variables.

Baseline variables		Quality of life						n	χ2
		Average		Good		Very good			
		f	%	f	%	f	%		
Nature of burns	Thermal burn	7	36.8%	5	26.3%	7	36.8%	19	**χ2=11.14 P=0.03*(S)**
	Electrical burn	6	42.9%	8	57.1%	0	0.0%	14	
	Chemical burn	0	0.0%	0	0.0%	0	0.0%	0	
	Scald	8	47.1%	2	11.8%	7	41.2%	17	
Total Body Surface Area of the burn	<50%	15	37.5%	15	37.5%	10	25.0%	40	χ2=5.35 P=0.07(NS)
	> 50%	6	60.0%	0	0.0%	4	40.0%	10	
Site of burns in the body	Head/face	0	0.0%	0	0.0%	2	100.0%	2	χ2=19.81 P=0.07(NS)
	Neck	0	0.0%	1	50.0%	1	50.0%	2	
	Upper arm	8	47.1%	6	35.3%	3	17.6%	17	
	Trunk	0	0.0%	0	0.0%	2	100.0%	2	
	Chest	4	57.1%	2	28.6%	1	14.3%	7	
	Lower limbs	0	0.0%	0	0.0%	2	100.0%	2	
	Multiple sites	9	50.0%	6	33.3%	3	16.7%	18	
Degree of burns	1st degree	0	0.0%	0	50.0%	4	100.0%	4	**χ2=18.63 P=0.01**(S)**
	2nd degree	3	21.4%	1	7.2%	10	71.4%	14	
	3rddegree	1	50.0%	1	50.0%	0	0.0%	2	
	Mixed degree	17	56.7%	13	36.7%	0	00%	30	
Place of occurrence	Home	11	42.3%	5	19.2%	10	38.5%	26	χ2=4.21 P=0.12(NS)
	Work area	10	41.7%	10	41.7%	4	16.7%	24	
	Forest/Hills	0	0.0%	0	0.0%	0	0.0%	0	
	Hospital/ shelter home	0	0.0%	0	0.0%	0	0.0%	0	

Cause of burns	Kerosene	3	27.3%	5	45.5%	3	27.3%	11	
	Crackers	4	66.7%	0	0.0%	2	33.3%	6	
	Hot liquids	8	50.0%	2	12.5%	6	37.5%	16	
	Petrol	0	0.0%	4	66.7%	2	33.3%	6	$\chi 2=13.41$
	Oil	4	57.1%	2	28.6%	1	14.3%	7	P=0.16(NS)
	Acids/ chemical	2	50.0%	2	50.0%	0	0.0%	4	
	Gas stove	0	0.0%	0	0.0%	0	0.0%	0	
Post burn period	<1 year	20	57.1%	5	14.3%	10	28.6%	35	**$\chi 2=21.08$**
	1-3 years	1	14.3%	6	85.7%	0	0.0%	7	**P=0.001*** **
	>3 years	0	0.0%	4	50.0%	4	50.0%	8	**(S)**

The above table 7 denotes, association between the Quality of life among male accidental post burn patients with baseline variables. Chi square test reveals that there was a significant association between the quality of life and nature of burns ($\chi 2=11.14$), (P=0.03), degree of burns ($\chi 2=18.63$), (P=0.01), post burn period ($\chi 2=21.08$), (P=0.00) at 0.05% level (**i e) Scald nature of burns, 1st degree burn and more than 3 years of post-burn period.** Other variables were not statistically associated with the quality of life.

Association between the Quality of life among male accidental post burn patients with their baseline variables.

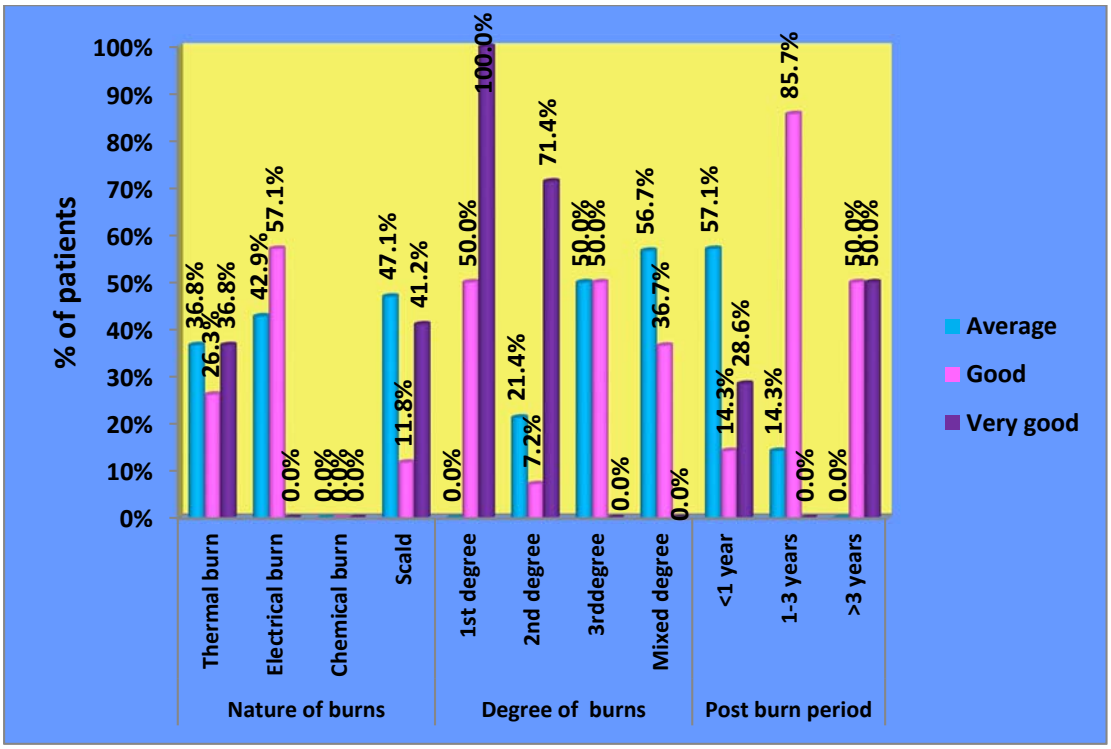


Figure 19: Cylinder diagram regarding the association between the Quality of life among male accidental post burn patients with baseline variables.

Chi square test reveals that there was a significant association between the quality of life and nature of burns ($\chi 2=11.14$), (P=0.03), degree of burns ($\chi 2=18.63$), (P=0.01), post burn period ($\chi 2=21.08$), (P=0.00) at 0.05% level **(i e) Scald nature of burns , 1st degree burn and more than 3 years of post burn period .** Other variables were not statistically associated with the quality of life.

Section IV

Association between the Quality of life among female accidental post burn patients with their selected socio demographic and baseline variables.

Table 8

Association between the Quality of life among female accidental post burn patients with their selected socio demographic variables.

Socio Demographic variables		Quality of life						n	χ^2
		Average		Good		Very good			
		f	%	f	%	f	%		
Age	<25 yrs	0	0.0%	9	64.3%	5	35.7%	14	**χ^2=15.68 P=0.02*(S)**
	26-35 yrs	8	40.0%	3	15.0%	9	45.0%	20	
	36-44 yrs	1	7.7%	4	30.8%	8	61.5%	13	
	>55 yrs	0	0.0%	1	33.3%	2	66.7%	3	
Residence	Rural	7	31.8%	8	36.4%	7	31.8%	22	χ^2=7.78 P=0.10(NS)
	Suburban	2	7.7%	9	34.6%	15	57.7%	26	
	Urban	0	0.0%	0	0.0%	2	100.0%	2	
Education	No formal education	2	20.0%	2	20.0%	6	60.0%	10	χ^2=14.19 P=0.08(NS)
	Primary Education	7	25.9%	9	33.3%	11	40.7%	27	
	High school education	0	0.0%	2	28.6%	5	71.4%	7	
	Higher secondary	0	0.0%	4	100 %	0	0.0%	4	
	Graduate and above	0	0.0%	0	0.0%	2	100.0%	2	
Occupation	Private employee	0	0.0%	2	50.0%	2	50.0%	4	**χ^2=12.78 P=0.04*(S)**
	Government employee	0	0.0%	0	0.0%	0	0.0%	0	
	Coolie	0	0.0%	3	27.3%	8	72.7%	11	
	Self employment	0	0.0%	0	0.0%	4	100.0%	4	
	Unemployed	9	29.0%	12	38.7%	10	32.3%	31	
Family income	<Rs.2000	2	33.3%	2	33.3%	2	33.3%	6	χ^2=6.37 P=0.17(NS)
	Rs.2001-5000	2	9.1%	11	50.0%	9	40.9%	22	
	>Rs. 5000	5	22.7%	4	18.2%	13	59.1%	22	
Type of family	Nuclear	4	10.3%	12	30.8%	23	59.0%	39	**χ^2=10.90 P=0.01**(S)**
	Joint family	5	45.5%	5	45.5%	1	9.1%	11	
	Extended family	0	0.0%	0	0.0%	0	0.0%	0	

Marital status	Married	8	27.6%	5	17.2%	16	55.2%	29	**$\chi 2=12.70$ P=0.01**(S)**
	Unmarried	0	0.0%	10	55.6%	8	44.4%	18	
	Widow/widower	1	33.3%	2	0.0%	0	0.0%	3	
	Separated	0	00.0%	0	0.0%	0	0.0%	0	

The above table 8 denotes, association between the Quality of life among female accidental post burn patients with their selected socio demographic variables. Chi square test reveals that there was a significant association between the quality of life and age ($\chi 2=15.68$), (P=0.02),occupation ($\chi 2=12.78$), (P=0.04), type of family ($\chi 2=10.90$), (P=0.01) and marital status ($\chi 2=12.70$), (P=0.01) at 0.05% level **(i e) In the age group between 26-35 years, unemployed, nuclear family and married.** Other variables was not statistically associated with the quality of life.

Association between the Quality of life among female accidental post burn patients with their selected socio demographic variables.

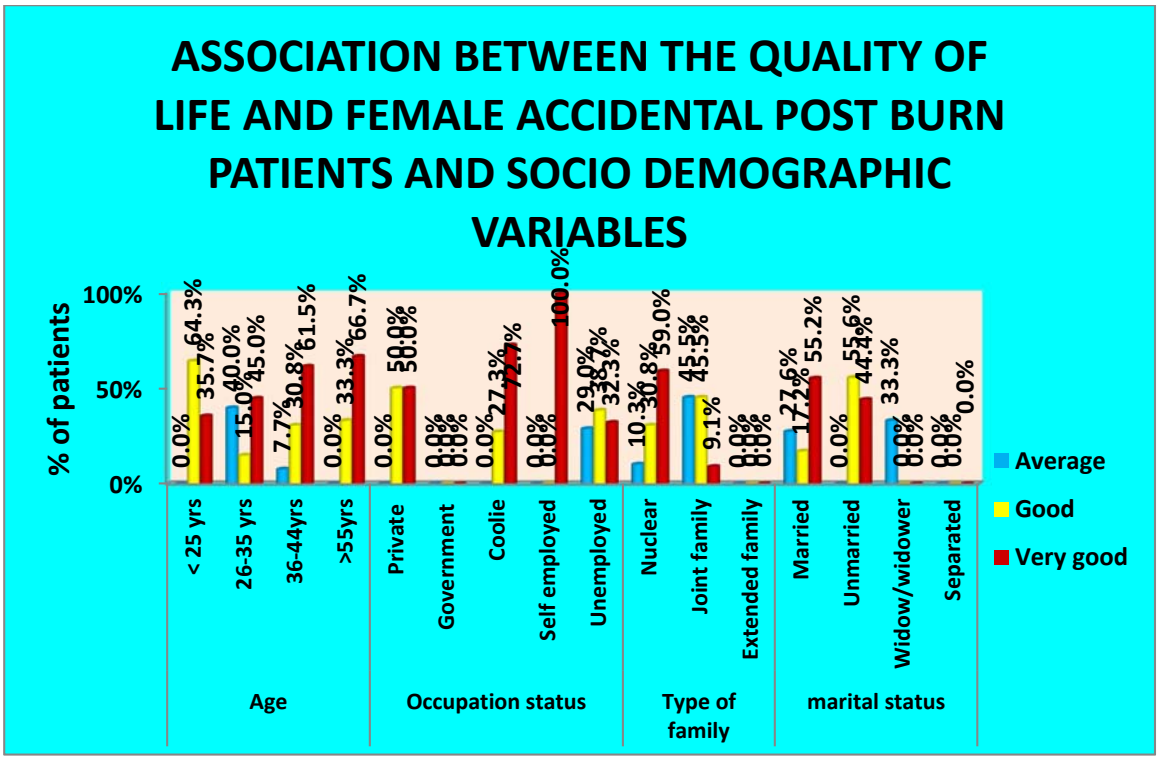


Figure 20: Cylinder diagram regarding the association between the Quality of life among female accidental post burn patients with their selected socio demographic variables.

Chi square test reveals that there was a significant association between the quality of life and age ($\chi 2=15.68$), ($P=0.02$), occupation ($\chi 2=12.78$), ($P=0.04$), type of family ($\chi 2=10.90$), ($P=0.01$) and marital status ($\chi 2=12.70$), ($P=0.01$) at 0.05% level **(i e) In the age group between 26-35 years, unemployed, nuclear family and married.** Other variables was not statistically associated with the quality of life.

Table 9: Association between the Quality of life among female accidental post burn patients with their baseline variables

Baseline variables		Quality of life						n	χ^2
		Average		Good		Very good			
		f	%	f	%	f	%		
Nature of burns	Thermal burn	9	31.0%	11	37.9%	9	31.0%	29	**χ^2=11.88 P=0.02* (S)**
	Electrical burn	0	0.0%	0	0.0%	2	100.0%	2	
	Chemical burn	0	0.0%	0	0.0%	0	0.0%	0	
	Scald	0	0.0%	6	31.6%	13	68.4%	19	
Total Body Surface Area of the burn	<50%	8	17.4%	16	34.8%	22	47.8%	46	χ^2=0.22 P=0.89 (NS)
	> 50%	1	25.0%	1	25.0%	2	50.0%	4	
Site of burns in the body	Head/face	0	0.0%	2	100.0%	0	0.0%	2	χ^2=19.51 P=0.08 (NS)
	Neck	0	0.0%	0	0.0%	2	100.0%	2	
	Upper arm	0	0.0%	4	40.0%	6	60.0%	10	
	Trunk	0	0.0%	0	0.0%	6	100.0%	6	
	Chest	0	0.0%	0	0.0%	2	100.0%	2	
	Lower limbs	0	0.0%	4	57.1%	3	42.9%	7	
	Multiple sites	9	42.9%	7	33.3%	5	23.8%	21	
Degree of burns	1st degree	0	0.0%	1	25.0%	7	75.0%	8	**χ^2=13.79 P=0.03* (S)**
	2nd degree	2	9.5%	7	33.3%	12	57.2%	21	
	3rddegree	0	0.0%	2	50.0%	2	50.0%	4	
	Mixed degree	7	41.2%	7	41.2%	3	17.6%	17	
Place of occurrence	Home	9	21.4%	15	35.7%	18	42.9%	42	χ^2=3.38 P=0.18 (NS)
	Work area	0	0.0%	2	25.0%	6	75.0%	8	
	Forest/Hills	0	0.0%	0	0.0%	0	0.0%	0	
	Hospital/shelter home	0	0.0%	0	0.0%	0	0.0%	0	
Cause of burns	Kerosene	7	33.3%	9	42.9%	5	23.8%	21	χ^2=12.52 P=0.07 (NS)
	Crackers	0	0.0%	2	33.3%	4	66.7%	6	
	Hot liquids	0	0.0%	4	25.0%	12	75.0%	16	
	Petrol	0	0.0%	0	0.0%	0	0.0%	0	
	Oil	2	28.6%	2	28.6%	3	42.9%	7	
	Acids/ chemicals	0	0.0%	0	0.0%	0	0.0%	0	
	Gas stove	0	0.0%	0	0.0%	0	0.0%	0	

Post burn period	<1 year	5	18.5%	6	22.2%	16	59.3%	27	**$\chi 2=10.39$ P=0.03* (S)**
	1-3 years	2	15.4%	9	69.2%	2	15.4%	13	
	>3 years	2	20.0%	2	20.0%	6	60.0%	10	

The above table 9 denotes, association between the Quality of life among female accidental post burn patients with the baseline variables. Chi square test reveals that there was a significant association between the quality of life and nature of burns ($\chi 2=11.88$), (P=0.02),degree of burns ($\chi 2=13.79$), (P=0.03),type of family ($\chi 2=10.90$), (P=0.01) and post burn period ($\chi 2=10.39$), (P=0.03**)** at 0.05% level **(i e) Thermal burns, 2nd degree and less than 1 year of post burn period .**Other variables was not statistically associated with the quality of life.

Association between the Quality of life among female accidental post burn patients with their baseline variables

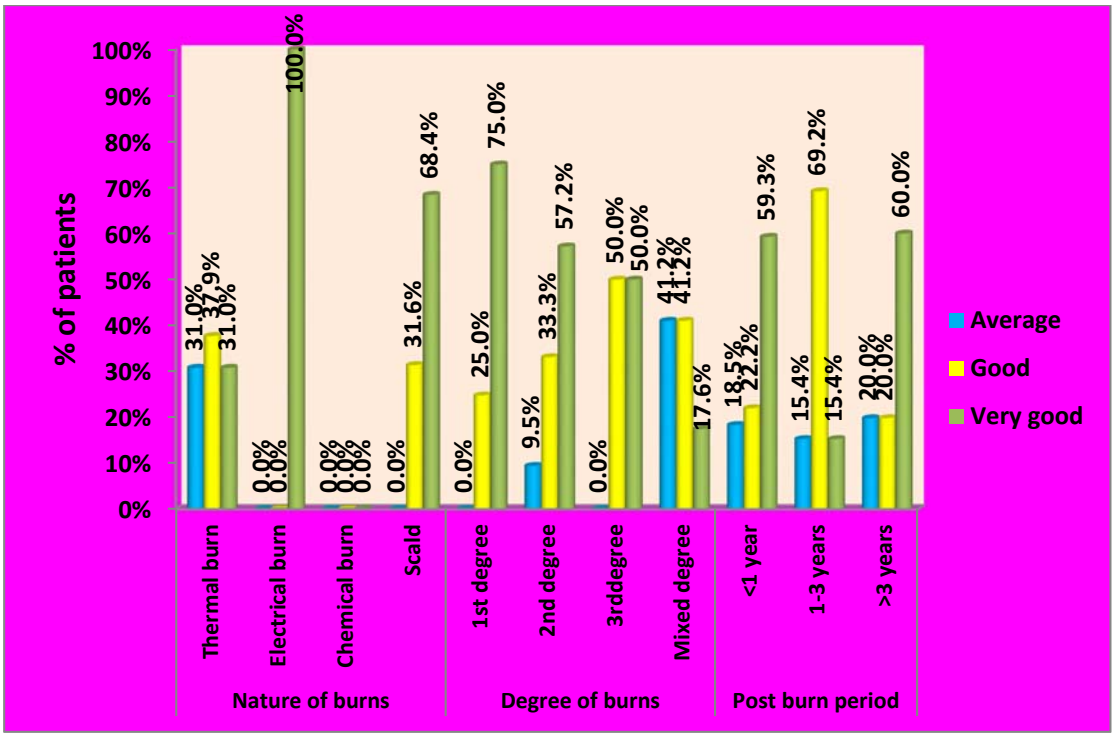


Figure 21: Cylinder diagram depicting association between the quality of life among female accidental post burn patients with the baseline variables.

Chi square test reveals that there was a significant association between the quality of life and nature of burns ($\chi 2=11.88$),(P=0.02),degree of burns ($\chi 2=13.79$), (P=0.03),type of family ($\chi 2=10.90$), (P=0.01) and post burn period ($\chi 2=10.39$), (P=0.03) at 0.05% level **(i e) Thermal burns, 2nd degree and less than 1 year of post burn period .**Other variables was not statistically associated with the quality of life.

DISCUSSION

CHAPTER V

DISCUSSION

This chapter discussed about the result of the study interpreted from the statistical analysis. Burn injuries are one of the major environmental factors responsible for significant mortality and morbidity in developing countries. Death due to burns is an important public health problem. Accidental burns account for a considerable number of burns admissions worldwide. Non – fatal burns are a leading cause of morbidity, including prolonged hospitalization, disfigurement and disability, often with resulting stigma and rejection. Quality of life in burn injured patients was affected by severity of burn injury. The eventual outcome for burn patients is related to injury severity, individual physical characteristics of patients, motivation of patient, quality of treatment and after care support. Burn patients often require years of supervised rehabilitation, reconstruction and psychosocial support. The quality of burn care is no longer measured only by survival but also by long term function and appearance.

The aim of the study was to assess the quality of life among accidental post burn patients attending plastic surgery OPD at Govt. Rajaji hospital, Madurai.100 samples were selected by non-probability (consecutive sampling) technique. Quality of life among accidental post burn patients was assessed with standardized Burn specific health scale -Breif.

The objectives of the study were

- To assess the Quality of life among accidental post burn patients attending plastic surgery OPD at Govt. Rajaji Hospital ,Madurai 20.

- To compare the quality of life among male and female accidental post burn patients attending plastic surgery OPD at Govt Rajaji Hospital ,Madurai 20.
- To associate the quality of life among male and female accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai and their selected socio demographic and baseline variables.

The following hypotheses were set for the study

All the hypotheses were tested at **0.05 level of significance.**

H_1 - There is a statistically significant difference between quality of life among male and female accidental post burn patients attending plastic surgery OPD at Government Rajaji hospital, Madurai-20.

H_2 - There is a statistically significant association between quality of life among male and female accidental post burn patients attending plastic surgery OPD at Government Rajaji hospital and their selected socio demographic and baseline variables.

The findings of the study were discussed under the following headings

- Distribution of accidental post burn patients according to their selected socio demographic and baseline variables.
- Comparison between the Quality of life among male and female accidental post burn patients.
- Association between the Quality of life among male accidental post burn and their selected socio demographic and baseline variables.
- Association between the Quality of life among female accidental post burn patients and their selected socio demographic and baseline variables.

Burn injuries are among the most devastating of all injuries and have been recognized as a major global public health problem which contributes approximately 90% of all burns and greater than 95% of global burn death, estimated at over 300,000 each year. Burns injury and its associated mortality and morbidity is prevalent all over the world but it has an altogether different significance in India.

According to WHO estimates about 265 000 deaths occur each year from fires alone globally, with more deaths from scalds, electrical burns, and other forms of burns for which data are not available. The majority of these deaths occur in low and middle income countries, with almost half occur in the WHO South – East Region. In India around 7 million people suffer from burn injuries each year with 1.4 lakh deaths and 2.4 lakh people with suffer with disability.

Accidental post burn patients have a negative aftermath consequences compared with the self-immolation post burns. Quality of life in burn injured patients was affected by severity of burn injury .They have an anxiety about their future in mind about their post burn scars or the inability to work as previously. They frequently express about their worries on the burn incident that took place and the treatment to be followed. The eventual outcome for burn patients is related to injury severity, individual physical characteristics of patients, motivation of patient, quality of treatment and after care support, lowering their quality of life. Accidental burn patients have to be assessed on their perception of life after burns which helps in analysing the treatment, outcome and discuss about the prevention and precautionary measures which decreases the morbidity and mortality. Thus, Burn patients often require years of supervised rehabilitation, reconstruction and psychosocial support. The quality of burn care is no longer measured only by survival but also by long term function and appearance.

Hence the study aimed in assessing the quality of life among accidental post burn patients in the follow up period at plastic surgery OPD.

5.1 Discussion based on the socio demographic and baseline variables among male and female accidental post burn patients.

It is interesting to note that while mentioning about the age group of male accidental post burn patients, majority 16 (32.00%) belonged to the age group between 36-44 years. Whereas in female accidental post burn patients, majority 20 (40.00%) belonged to the age group between 26-35 years.

As far as area of residence in male accidental post burn patients, majority 24 (48%) hailed from rural, Whereas in female accidental post burn patients majority, 26 (52.00%) hailed from suburban.

When discussing educational status, in male accidental post burn patient's majority 27 (54.00%) studied up to primary education. Similarly in female accidental post burn patients, majority 27 (54.00%) studied up to primary education.

While stating occupation in male accidental post burn patients, majority 15 (30.00%) were coolie .Whereas in female accidental post burn patients, majority 31 (62.00%) were unemployed.

While comparing family monthly income in male accidental post burn patients, majority 30 (60.00%) earned more than Rs.5000.Whereas in female accidental post burn patients, majority 22 (44.00%) earned between Rs.2001-Rs.5000.

With respect to type of family in the male accidental post burn patients, majority 37 (74.00%) hailed from nuclear family. As such in female accidental post burn patients, majority 39 (78.00%) hailed from nuclear family.

With respect to marital status in male accidental post burn patients, majority 30 (60.00%) were married. Whereas in female accidental post burn patients, majority 29 (58.00%) were married.

While denoting the nature of burns in male accidental post burn patients, majority 19 (38.00%) were affected by thermal burns. Similarly in female accidental post burn patients, majority 29 (58.00%) were also affected by thermal burns.

While depicting the total body surface area burnt in male accidental post burn patients, majority 40 (80.00%) were below 50%.As such in female accidental post burn patients, majority 46 (92.00%) were below 50% of total body surface area.

Regarding the site of burns in the body, male accidental post burn patients, majority 18 (36.00%) were burnt at multiple sites. As such in female accidental post burn patients, majority 21 (42.00%) were also burnt at multiple sites.

When identifying the degree of burns in male accidental post burn patients, majority 30 (60.00%) were in mixed degree of burns. Whereas in female accidental post burn patients, majority 21 (42.00%) were in 2^{nd} degree of burns.

As far as place of occurrence in male accidental post burn patients, majority 26 (52.00%) occurred in home. Similarly in female accidental post burn patients, majority 42 (84.00%) occurred in home.

While considering the cause of burns in male accidental post burn patients, majority 16 (32.00%) were due to hot liquids,While in female accidental post burn patients, majority 21 (42.00%) were due to kerosene/Kerosene stove.

Regarding post burn period in male accidental post burn patients, majority 35 (70.00%) were had less than 1 year.Whereas in female accidental post burn patients, majority 27 (54.00%) were had less than 1 year.

5.2 Discussion of study based on its objectives

- **The first objective of the study was to assess the Quality of life among accidental post burn patients attending plastic surgery OPD, Govt Rajaji Hospital ,Madurai .**

Burn specific health scale –Brief tool was used to assess the quality of life among accidental post burn patients, majority 21 (42%) of them were had average quality of life.15 (30%) of them were had good quality of life and 14 (28%) of them were had very good quality of life and none of them were had poor quality of life.

While considering female accidental post burn patients, majority 24 (48%)of them were had very good quality of life, 17 (34%) of them were had good quality of life, 9 (18%) of them were had average quality of life, and none of them were had poor quality of life. Thus female accidental post burn patients were had very good quality of life than male accidental post burn patients

The present study findings was supported by **wang lin ying et al.,(2010)** ,gender differences in quality of life and coping patterns after discharge for patients with burns in China. Cross-sectional survey research design and purposive sampling were used in this study, for which 92 subjects, including 56 males and 36 females. Quality of life was measured by the burn-specific health scale-brief (BSHS-B) and coping patterns were measured with the coping with burns questionnaire (CBQ). An independent t-test and bivariate correlate were employed to analyse the data. The study results showed there was a statistically significant gender difference in the sub-domain of the BSHS-B score for affect and relations, $p<0.05$, and for coping patterns: emotion support, $p<0.05$. The study indicated that women are more sensitive to relationships with family after discharge and tend to exhibit depressive symptoms. For women, emotional support is more important than it is for men.

- **The second objective of the study was to compare the quality of life among male and female accidental post burn patients attending plastic surgery OPD, Govt Rajaji Hospital ,Madurai .**

Considering male accidental post burn patients, the mean quality of life score 15.70 with standard deviation 7.24 had major disturbance in affect and the calculated "t" value is 1.86, at (p=0.07) and the mean quality of life score 4.72 with standard deviation 6.43 had least disturbance in work and the calculated " t" value is 3.30 (p= 0.001). While in female accidental post burn patients, the mean quality of life score 18.68 with standard deviation 3.09 had major disturbance in hand function and the calculated " t" value is 1.86 (p= 0.001) and mean score quality of life 8.48 with standard deviation 6.11 had least disturbance in body image and the calculated " t" value is 1.47 (p=0.14) . Thus on an average, female accidental post burn patients had 69.74% of quality of life score , while male patients had only 58.04% of quality of life score .Thus, there is a statistically significant difference in male and female on hand function, treatment regimen, work and simple abilities..

The present findings were supported by **Chirag Bhanshali A et al.,(2017)** ,an epidemiological, cohort review on burn injuries and its mortality risk factors in a tertiary care hospital, Maharastra with 3179 patients. The study revealed that the mean age of patients was 28 years (SD=14.7 years) and overall male to female ratio was 0.6. The percent of Total body surface area for burned patients ranged between 1% and 100% and maximum number of patients were admitted with 30 to 50 % burns (27.5%) The median hospital stay was 5 days. There was a significant association between Total body surface area burns and hospital stay (P<0.001). 7.3% patients were discharged from the hospital after successful treatment. 1733 (54.51%) deaths were recorded. Death rate was higher amongst females as compared to males.

Mortality rate was highest in age group of 12–26 years. Moreover, there was a significant correlation between Total body surface area burns and mortality (P<0.001).

It was also supported by **Wasiak J.,(2017)** a prospective study to assess changes in health related quality of life. Using convenient sampling 114 adults were taken and measured at 3, 6 and 12 months of post-burn. The study revealed that in 12 months post-injury, female patients showed overall poorer physical ($p = 0.01$) and mental health status ($p < 0.001$), greater psychological distress ($p < 0.001$), and greater difficulty with aspects of burn-specific health related quality of life, body image ($p < 0.001$), affect ($p < 0.001$), interpersonal functioning ($p = 0.005$), heat sensitivity ($p = 0.01$) and treatment regime ($p = 0.01$). While significant interaction effects suggested that female patients had more improvement in difficulties with treatment regimen ($p = 0.007$), female patients continued to report greater difficulty with multiple aspects of physical and psychosocial health status 12 months post-injury. The study concludes that urgent clinical and research attention utilising an evidence-based research framework, which incorporates the use of larger sample sizes, the use of validated instruments to measure appropriate outcomes, and a commitment to monitoring long-term care, can only improve burn-care.

Hence the hypothesis H_1 -There is statistically significant difference between quality of life among male and female accidental post burn patients attending plastic surgery OPD, Government Rajaji Hospital, Madurai was accepted.

The third objective of the study was to associate the quality of life among male and female accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai and their selected socio demographic and baseline variables.

In order to find out the association between quality of life among male and female accidental post burn patients with their selected socio demographic and baseline variables. Chi square test reveals that there was a significant association between the male accidental post burn patients quality of life and area of residence ($\chi 2$=10.77), (P=0.03), educational status ($\chi 2$=15.27), (P=0.05), type of family ($\chi 2$=12.73), (P=0.01) at 0.05% level. **(i.e) rural, primary education level and joint family patients are having high quality of life .** Other variables were not statistically associated with the quality of life. While among baseline variables,there was a significant association between the quality of life and nature of burns ($\chi 2$=11.14), (P=0.03),degree of burns ($\chi 2$=18.63), (P=0.01), post burn period ($\chi 2$=21.08), (P=0.00) at 0.05% level **(i e) Scald nature of burns , 1st degree burn and more than 3 years of post burn period .** Other variables were not statistically associated with the quality of life.

Chi square test reveals that there was a significant association between the quality of life among female accidental post burn patients with their selected socio demographic variables. Chi square test reveals that there was a significant association between the quality of life and age ($\chi 2$=15.68), (P=0.02), occupation ($\chi 2$=12.78), (P=0.04), type of family ($\chi 2$=10.90), (P=0.01) and marital status ($\chi 2$=12.70), (P=0.01) at 0.05% level **(i e) In the age group between 26-35 years, unemployed, nuclear family and married.** Other variables were not statistically associated with the quality of life. While among baseline variables ,Chi square test reveals that there

was a significant association between the quality of life and nature of burns ($\chi 2$=11.88),(P=0.02),degree of burns ($\chi 2$=13.79), (P=0.03), type of family ($\chi 2$=10.90), (P=0.01) and post burn period ($\chi 2$=10.39), (P=0.03) at 0.05% level **(i.e) Thermal burns, 2nd degree and less than 1 year of post burn period.** Other variables were not statistically associated with the quality of life.

The present study was supported by **Fazia Shahid M.,(2017)** a cross sectional study on assessment of quality of life among accidental post burns at peshwar, Pakistan using consecutive sampling, which revealed that demographic characteristics and socioeconomic are prognostic risk factors associated with burn related injuries. The mean age of the sample was 17.08 years. The most frequent cause of burns was scald followed by flame. Female proportion was high (56%) and were significantly sustained scald and flame burn, whereas, male was observed by electric (84.2%) and contact burns (78.3%). The upper limbs was most commonly affected (11–20%) TBSA burned in 36.4% patients and 71.6% sustained partial thickness and mixed deep thickness. Majority of the incidence take place at home (88.4%). Majority reported moderate to severe problem. The depth and extent %TBSA burn and post burn period have negative impact on health dimensions. It revealed that quality of life was compromised in majority of post burn patients. Several demographic characteristics and clinical parameters related burns were important risk factors in assessment of quality of life in burn sustained patient

Hence the hypothesis H_2 – There is statistically significant association between quality of life among male and female accidental post burn patients and their selected socio demographic and baseline variables was accepted.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter deals with summary, conclusion and recommendations of the study. Further it includes implications for Nursing Practice, Nursing Education, Nursing Administration and Nursing Research.

6.1 Summary

The present study was done to assess the quality of life among accidental post burns patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai.

The objectives of the study were

- To assess the Quality of life among accidental post burn patients attending plastic surgery OPD at Govt. Rajaji Hospital, Madurai 20.
- To compare the quality of life among male and female accidental post burn patients attending plastic surgery OPD at Govt.Rajaji Hospital, Madurai 20.
- To associate the quality of life among male and female accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai and their selected socio demographic and baseline variables.

The following hypotheses were tested at 0.05 level of significance.

H_1 - There is a statistically significant difference between quality of life among male and female accidental post burn patients attending plastic surgery OPD at Government Rajaji hospital, Madurai-20.

H_2 - There is a statistically significant association between quality of life among male and female accidental post burn patients attending plastic

surgery OPD at Government Rajaji hospital and their selected socio demographic and baseline variables.

The study assumption was

- Burns patients have physical, emotional, social or environmental problems or disturbances.
- Post burn patients perceive their quality of life in different manner.

The conceptual model in this study was based on modified "Ferran et al's health related quality of life which focus on physical, emotional/behavioural symptoms of an individual after a injury. Non Experimental - Descriptive research design was used in this study. A sample of 100 accidental post burn patients attending plastic surgery OPD at Government Rajaji hospital, Madurai was selected by non probability (consecutive) sampling technique and quality of life was assessed by Burn specific health scale-Brief. After testing the validity and reliability of the tool, a pilot study was conducted on 10 non study subjects of accidental post burn patients attending plastic surgery OPD at Government Rajaji hospital, Madurai to find out the feasibility and practicability. The main study was started from 04.06.2018 to 13.07.2018. Based on the objectives and hypothesis the data gathered was analyzed by using both descriptive and inferential statistics.

The data collection tool consisted of three parts.

Section I : Socio demographic variables

It consists of socio demographic data of the clients. The socio demographic variables include age, sex, area of residence, educational status, occupation, family monthly income, type of family, marital status.

Section II -Baseline variables

It includes nature of burns, total body surface area burnt, site of burns in the body, degree of burn injury, site of occurrence, cause of burns ,post burn period.

Section III -Burn specific health scale-Brief

The burn specific health scale-brief is a standardized scale which consists of 40 items covering all the domains such as physical, psychological, social, environmental (heat sensitivity, affect, hand function, treatment regimens, work, sexuality, interpersonal relationships, simple abilities, and body image) and designed as a brief structured interview tool developed by Blades et al to ascertain the quality of life among post burn patients with minimum score 0 and maximum score 160.

Score	**Level**
< 40	Poor
40 -80	Average
81 -120	Good
121 - 160	Very good level

Content validity was obtained from five experts in the experts in the field of Psychiatric Nursing, one expert in Psychiatry and one expert in Psychology. The data collection was done by standardized Burn specific health scale-Brief to assess the quality of life.

Collected data was analyzed by using both descriptive statistics (Mean, Standard Deviation, Frequency and Percentage) and inferential statistics (Independent "t" test and Chi-Square) and results were analyzed.

6.2 Major findings of the study

- According to the age group in male accidental post burn patients, majority 16 (32.00%) belonged to the age group between 36-44 years. Whereas in female accidental post burn patients, majority 20 (40.00%) belonged to the age group between 26-35 years.
- As far as area of residence in male accidental post burn patients, majority 24 (48%) hailed from rural, Whereas in female accidental post burn patients majority, 26 (52.00%) hailed from suburban.
- When discussing educational status, in male accidental post burn patients majority 27 (54.00%) studied up to primary education. Similarly in female accidental post burn patients, majority 27 (54.00%) studied up to primary education.
- While stating occupation in male accidental post burn patients, majority 15 (30.00%) were coolie .Whereas in female accidental post burn patients, majority 31 (62.00%) were unemployed.
- While comparing family monthly income in male accidental post burn patients, majority 30 (60.00%) earned more than Rs.5000.Whereas in female accidental post burn patients, majority 22 (44.00%) earned between Rs.2001-Rs.5000.
- With respect to type of family in the male accidental post burn patients, majority 37 (74.00%) hailed from nuclear family. As such in female accidental post burn patients, majority 39 (78.00%) hailed from nuclear family.

- With respect to marital status in male accidental post burn patients, majority 30 (60.00%) were married. Whereas in female accidental post burn patients, majority 29 (58.00%) were married.
- While denoting the nature of burns in male accidental post burn patients, majority 19 (38.00%) were affected by thermal burns. Similarly in female accidental post burn patients, majority 29 (58.00%) were also affected by thermal burns.
- While depicting the total body surface area burnt in male accidental post burn patients, majority 40 (80.00%) were below 50%.As such in female accidental post burn patients, majority 46 (92.00%) were below 50% of total body surface area.
- Regarding the site of burns in the body, male accidental post burn patients, majority 18 (36.00%) were burnt at multiple sites. As such in female accidental post burn patients, majority 21 (42.00%) were also burnt at multiple sites.
- When identifying the degree of burns in male accidental post burn patients, majority 30 (60.00%) were in mixed degree of burns. Whereas in female accidental post burn patients, majority 21 (42.00%) were in 2^{nd} degree of burns.
- As far as place of occurrence in male accidental post burn patients, majority 26 (52.00%) occurred in home. Similarly in female accidental post burn patients, majority 42 (84.00%) occurred in home.
- While considering the cause of burns in male accidental post burn patients, majority 16 (32.00%) were due to hot liquids, While in female accidental

post burn patients, majority 21 (42.00%) were due to kerosene/Kerosene stove.

- Regarding post burn period in male accidental post burn patients, majority 35 (70.00%) were had less than 1 year. Whereas in female accidental post burn patients, majority 27 (54.00%) were had less than 1 year.

Burn specific health scale-Breif was used to assess the quality of life among accidental post burn patients. In male patients, majority 21 (42%) of them were had average quality of life, 15 (30%) of them were had good quality of life and 14 (28%) of them were had very good quality of life and none of them were had poor quality of life.

While considering female accidental post burn patients, majority 24 (48%) of them were had very good quality of life, 17 (34%) of them were had good quality of life, 9 (18%) of them were had average quality of life, and none of them were had poor quality of life. Thus female accidental post burn patients were had very good quality of life than male accidental post burn patients.

- In male accidental post burn patients, the mean quality of life score 15.70 with standard deviation 7.24 had major disturbance in affect and the calculated "t" value is 1.86, at (p=0.07) and the mean quality of life score 4.72 with standard deviation 6.43 had least disturbance in work and the calculated " t" value is 3.30 (p= 0.001).
- While in female accidental post burn patients, the mean quality of life score 18.68 with standard deviation 3.09 had major disturbance in hand function and the calculated " t" value is 1.86 (p= 0.001) and mean score quality of life 8.48 with standard deviation 6.11 had least disturbance in body image and the calculated " t" value is 1.47 (p=0.14) .

- Thus on an average, female accidental post burn patients had 69.74% of quality of life score , while male patients had only 58.04% of quality of life score .Thus, there is a statistically significant difference in male and female on hand function, treatment regimen, work and simple abilities.
- The association between quality of life among male and female accidental post burn patients with their selected socio demographic and baseline variables. Chi square test reveals that there was a significant association between the male accidental post burn patients quality of life and area of residence ($\chi 2=10.77$), (P=0.03), educational status ($\chi 2=15.27$), (P=0.05), type of family ($\chi 2=12.73$), (P=0.01) at 0.05% level. **(i.e) Rural, primary education level and joint family.** Other variables were not statistically associated with the quality of life.
- While among baseline variables, there was a significant association between the quality of life and nature of burns ($\chi 2=11.14$), (P=0.03),degree of burns ($\chi 2=18.63$), (P=0.01), post burn period ($\chi 2=21.08$), (P=0.00) at 0.05% level **(i.e) Scald nature of burns , 1st degree burn and more than 3 years of post burn period .** Other variables were not statistically associated with the quality of life.
- Chi square test reveals that there was a significant association between the quality of life among female accidental post burn patients with their selected socio demographic variables. Chi square test reveals that there was a significant association between the quality of life and age ($\chi 2=15.68$), (P=0.02),occupation ($\chi 2=12.78$), (P=0.04), type of family ($\chi 2=10.90$), (P=0.01) and marital status ($\chi 2=12.70$), (P=0.01) at 0.05% level **(i.e) In the age group between 26-35 years, unemployed, nuclear family and married.** Other variables were not statistically associated with the quality of life.

- While among baseline variables ,Chi square test reveals that there was a significant association between the quality of life and nature of burns ($\chi 2$=11.88),(P=0.02), degree of burns ($\chi 2$=13.79), (P=0.03), type of family ($\chi 2$=10.90), (P=0.01) and post burn period ($\chi 2$=10.39), (P=0.03) at 0.05% level **(i.e) Thermal burns, 2nd degree and less than 1 year of post burn period.** Other variables were not statistically associated with the quality of life.

6.3 Conclusion

The study findings evidence that most of the accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital were had low quality of life. Further the study revealed that the male accidental post burn patients had low quality of life than female accidental post burn patients.

6.4 Implications of the study

The finding of the study have several implications on nursing practice, education, administration and nursing research that can be used in the following areas of profession.

Nursing practice

- The nurses can be aware about physical, psychological, social and environmental problems faced by the accidental post burn patients.
- The nurses can learn and use Burn specific health scale-Brief to assess the quality of life among accidental post burn patients.
- Nurses identify the statistics about quality of life among accidental post burn patients at Government Rajaji Hospital, Madurai.
- The nurse will counsel the accidental post burn patients attending plastic surgery OPD to overcome the problems faced by them.

Nursing education

- The nurse educator create the awareness to the students about problems faced by the accidental post burn patients in various domains than the self-immolated burns.
- Nursing faculties can educate the nursing students to assess the quality of life among accidental post burn patients by using Burn specific health scale-Brief tool in their day to day practice.
- Students will periodically evaluate the quality of life among accidental post burn patients and help the patients to pursue the long course of treatment and to educate them to adjust with this society.

Nursing research

- Based on the study research, accidental post burn patients can be compared with the gender differences in quality of life and their coping patterns using COPE inventory scale.
- A study can be done on factors influencing resilience during rehabilitation period among accidental post burn patients.
- Nurse researchers have to develop newer tools to determine psychological problems among family problems of accidental post burn patients.
- One of the aims of nursing research is to expand and broaden the scope of nursing. Findings of this study will provide a base line data about quality of life among accidental post burn patients at GRH.

Nursing Administration

- Nursing Administrators can arrange in-service education or staff development programme periodically for creating the awareness of problems faced by the accidental post burn patients.

- Nurse Administrators will motivate the nurses to gain adequate knowledge on quality of life and encourage them to identify the quality of life in 3rd,6thand 12th month of post burn period.

6.5 Recommendations

Based on the findings of the study, the recommendations offered for future research were

- A similar study can be conducted with larger sample size.
- A comparative study on self immolated and accidental post burn patients can be conducted at various settings.
- A true experimental study can be conducted to evaluate the effectiveness of virtual reality/music therapy on procedural pain control and psychological well being among accidental burn patients admitted in the burns ward

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APPENDICES

APPENDIX –I

ETHICAL COMMITTEE APPROVAL LETTER

MADURAI MEDICAL COLLEGE
MADURAI, TAMILNADU, INDIA -625 020
(Affiliated to The Tamilnadu Dr.MGR Medical University,
Chennai, Tamil Nadu)

ETHICS COMMITTEE CERTIFICATE

Name of the Candidate	:	B.Janani
Course	:	M.Sc., Psychiatric Nursing
Period of Study	:	2016-2018
College	:	MADURAI MEDICAL COLLEGE
Research Topic	:	A descriptive study to assess the Quality of life among accidental post burn patients at Plastic surgery OPD at Govt. Rajaji Hospital,Madurai.
Ethical Committee as on	:	02.02.2018

The Ethics Committee, Madurai Medical College has decided to inform that your Research proposal is accepted.

Member Secretary

Chairman

Prof Dr V Nagaraajan
M.D., MNAMS, D.M., Dsc.,(Neuro), Dsc (Hons)
CHAIRMAN
IEC - Madurai Medical College
Madurai

Dean / Convenor

DEAN
Madurai Medical College
Madurai-20

16 MAY 2018

APPENDIX –II

CONTENT VALIDATION CERTIFICATE

CERTIFICATE FOR VALIDATION

This is to certify that the tool and content

SECTION – A : Socio demographic data

SECTION – B : Clinical variable

SECTION – C : Burn specific health scale

Prepared for data collection by Ms.B.Janani II Year M.Sc (N) student , College of Nursing , Madurai Medical College, Madurai-20, who has undertaken the study field on thesis entitled **"A study to assess the quality of life among accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai"**has been validated by me.

23/5/18

SIGNATURE OF THE EXPERT

Name: K. SATHIYAKALA

Designation: Reader in Nursing Department of Psychiatric Nursing

Institution: Sri Manakula Vinayagar Nursing College, puducherry.

Date:

CERTIFICATE FOR VALIDATION

This is to certify that the tool and content

SECTION – A : Socio demographic data

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SIGNATURE OF THE EXPERT

J. DEEPA, M.Sc(N),
Assistant Professor
Madurai Apollo College of Nursing
Othakadai, Madurai - 22

Name:

Designation:

Institution:

Date:

CERTIFICATE FOR VALIDATION

This is to certify that the tool and content

SECTION – A : Socio demographic data

SECTION – B : Clinical variable

SECTION – C : Burn specific health scale

Prepared for data collection by Ms.B.Janani II Year M.Sc (N) student , College of Nursing , Madurai Medical College, Madurai-20, who has undertaken the study field on thesis entitled **"A study to assess the quality of life among accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai"**has been validated by me.

G. Gomathy
SIGNATURE OF THE EXPERT

Name: G. Gomathy

Designation: Principal

Institution: PRINCIPAL CHITHIRAI COLLEGE OF NURSING MADURAI -9

Date: 25.5.2018

CERTIFICATE FOR VALIDATION

This is to certify that the tool and content

SECTION – A : Socio demographic data

SECTION – B : Clinical variable

SECTION – C : Burn specific health scale

Prepared for data collection by Ms.B.Janani II Year M.Sc (N) student , College of Nursing , Madurai Medical College, Madurai-20, who has undertaken the study field on thesis entitled **"A study to assess the quality of life among accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai"**has been validated by me.

R. Jancy Rachel Daisy
SIGNATURE OF THE EXPERT

Name: DR. R. JANCY RACHEL DAISY

Designation: PROFESSOR CUM HOD.

Institution: C.S.I. JEYARAJ ANNAPACKIAM COLLEGE OF NURSING, PASUMALAI, MADURAI-3.

Date: 25.5.2018

CERTIFICATE FOR VALIDATION

This is to certify that the tool and content

SECTION – A : Socio demographic data

SECTION – B : Clinical variable

SECTION – C : Burn specific health scale

Prepared for data collection by Ms.B.Janani II Year M.Sc (N) student , College of Nursing , Madurai Medical College, Madurai-20, who has undertaken the study field on thesis entitled **"A study to assess the quality of life among accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai"**has been validated by me.

SIGNATURE OF THE EXPERT

Name: KAVITHA.R.R

Designation: Tutor.

Institution: College of Nursing, JIPMER.

Date: 23/5/18

CERTIFICATE FOR VALIDATION

This is to certify that the tool and content

SECTION – A : Socio *demographic data*

SECTION – B : Baseline variable

SECTION – C : Burn specific health scale -Brief

Prepared for data collection by Ms.B.Janani II Year M.Sc (N) student , College of Nursing , Madurai Medical College, Madurai-20, who has undertaken the study field on thesis entitled **"A study to assess the quality of life among accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai"**has been validated by me.

SIGNATURE OF THE EXPERT

Name: Dr. T. KUMARAVEL M.D.,DCH.,DPM Professor & Senior Civil Surgeon Madurai Medical College Govt. Rajaji Hospital Madurai

Designation:

Institution:

Date: 28.7.2018

CERTIFICATE FOR VALIDATION

This is to certify that the tool and content

SECTION – A : Socio demographic data

SECTION – B : Baseline variable

SECTION – C : Burn specific health scale -Brief

Prepared for data collection by Ms.B.Janani II Year M.Sc (N) student , College of Nursing , Madurai Medical College, Madurai-20, who has undertaken the study field on thesis entitled **"A study to assess the quality of life among accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai"**has been validated by me.

N. Suresh

SIGNATURE OF THE EXPERT

Name: N. SURESH KUMAR

Designation: N. SURESH KUMAR
M.A., M.Phil.(Clin.Psy)
Asst. Prof, Cum Clinical Psychologist
Dept. of Psychiatry
Govt. Rajaji Hospital, Madurai-20

Institution:

Date:

APPENDIX – III

INFORMED CONSENT FORM

NAME : DATE :

Here I am acknowledging that information regarding the project study topic was explained to me and the positive reason was pointed out. I am voluntarily willing to participate in the study. At any time I am free to exclude from the study and promised that my all personal information should be kept in confidential.

Signature of the participants

ஆராய்ச்சி ஒப்புதல் கடிதம்

பெயர் : **தேதி:**

இந்த ஆராய்ச்சியின் விவரங்களும் அதன் நோக்கங்களும் எனக்கு தெளிவாக விளக்கப்பட்டது. எனக்கு விளக்கப்பட்ட விவரங்களை நான் புரிந்து கொண்டு நான் எனது சம்மதத்தை தெரிவிக்கிறேன். இந்த ஆராய்ச்சியில் பிறரின் நிபந்தனையின்றி என் சொந்த விருப்பத்தின் பேரில் தான் பங்கு பெறுகிறேன். மற்றும் நான் இந்த ஆராய்ச்சியில் இருந்து எந்நேரமும் பின் வாங்கலாம் என்பதையும் அதனால் எந்த பாதிப்பும் ஏற்படாது என்பதையும் புரிந்து கொண்டேன். நான் இந்த ஆராய்ச்சியின் விவரங்களை கொண்டு தகவல் தாளை பெற்று கொண்டேன். நான் என்னுடைய சுய நினைவுடன் மற்றும் முழு சுதந்திரத்துடன் இந்த ஆராய்ச்சியில் என்னையும் என் குழந்தையையும் இணைத்துக்கொள்ள சம்மதிக்கிறேன்.

கையொப்பம்

APPENDIX IV

Letter seeking and granting permission to conduct the pilot study and main study at plastic surgery, OPD, GRH, Madurai

From

B.Janani,
II year M.Sc (Nursing),
College of Nursing,
Madurai Medical College,
Madurai-20.

To

The Professor and HOD,
Department of burns & Plastic Surgery
Government Rajaji hospital,
Madurai-20.

Through, the proper channel,

Respected Madam,

Sub: College of Nursing, Madurai Medical College, Madurai, II Year M.Sc.(N). Psychiatric Nursing student seeking permission for conducting study in Plastic surgery OPD at Government Rajaji Hospital, Madurai – request regarding

As per the curriculum requirement by the Indian Nursing Council & The Tamilnadu Dr. M.G.R. Medical university, all the M.Sc.(N) students required to conduct a Dissertation as the partial requirement for the fulfillment of the course.

I have selected a study topic **"A study to assess the quality of life among accidental post burn patients attending plastic surgery OPD at Government Rajaji Hospital, Madurai".** Hence I request you to kindly permit me to conduct the study in the plastic surgery OPD at Government Rajaji Hospital, Madurai

Forwarded S. Rajamani 13/4/18

For Principal
COLLEGE OF NURSING
Madurai Medical College
Madurai-20.

Thanking you

Place: Madurai

Date: 13.4.18

Permitted Study

Yours sincerely

B. Janani

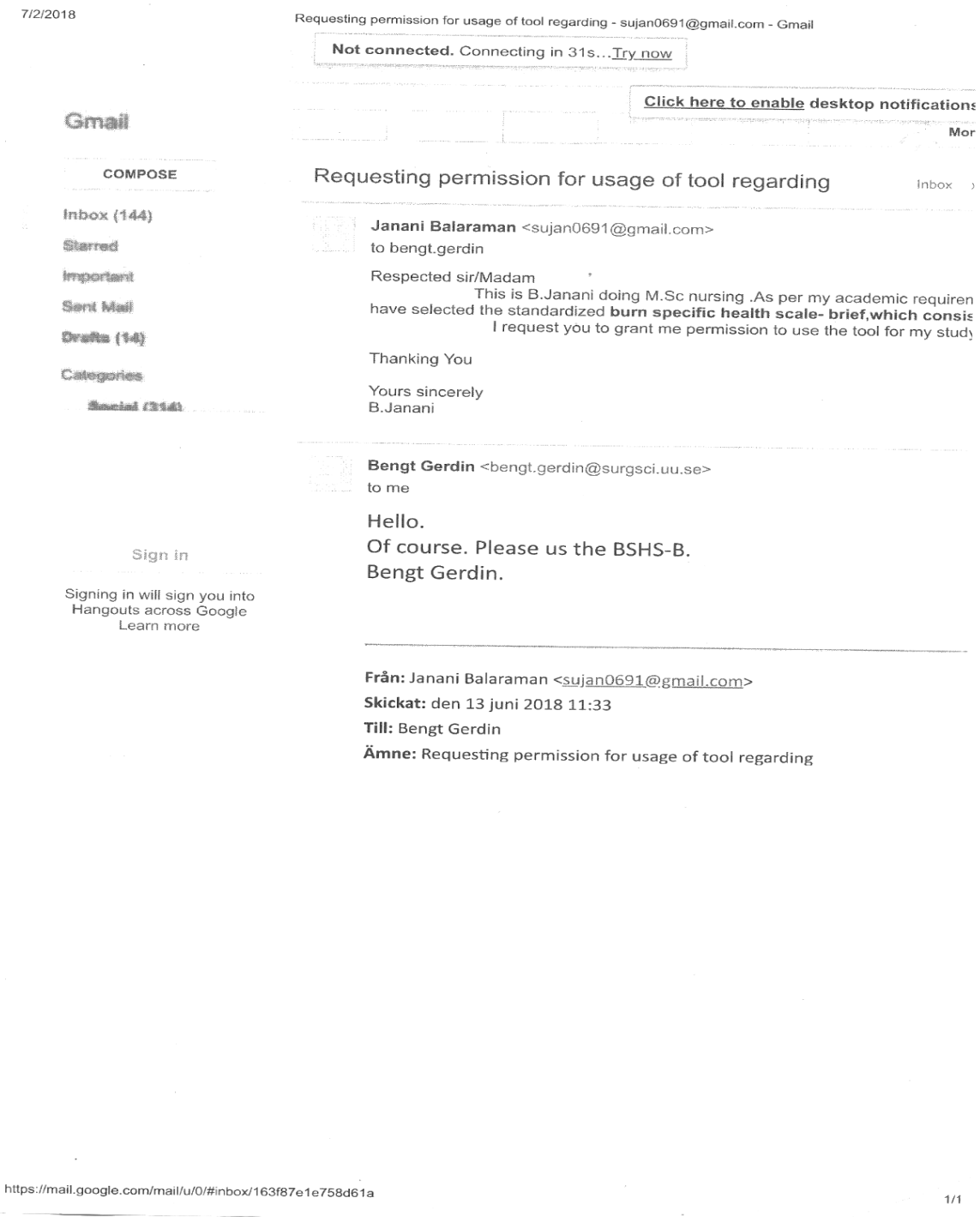
(B.JANANI)

18/4/18 DR.P.SURESHKUMAR
PROFESSOR OF PLASTIC SURGERY
Govt. Rajaji Hospital &
Madurai Medical College
MADURAI

APPENDIX V

Letter seeking and granting permission for the research tool

(Burn specific health scale-Brief)



7/2/2018 Requesting permission for usage of tool regarding - sujan0691@gmail.com - Gmail

Not connected. Connecting in 31s...Try now

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Mor

Gmail

COMPOSE

Inbox (144)

Starred

Important

Sent Mail

Drafts (14)

Categories

Social (214)

Sign in

Signing in will sign you into Hangouts across Google
Learn more

Requesting permission for usage of tool regarding Inbox

Janani Balaraman <sujan0691@gmail.com>
to bengt.gerdin

Respected sir/Madam
This is B.Janani doing M.Sc nursing .As per my academic requiren
have selected the standardized **burn specific health scale- brief,which consis**
I request you to grant me permission to use the tool for my study

Thanking You

Yours sincerely
B.Janani

Bengt Gerdin <bengt.gerdin@surgsci.uu.se>
to me

Hello.
Of course. Please us the BSHS-B.
Bengt Gerdin.

Från: Janani Balaraman <sujan0691@gmail.com>
Skickat: den 13 juni 2018 11:33
Till: Bengt Gerdin
Ämne: Requesting permission for usage of tool regarding

https://mail.google.com/mail/u/0/#inbox/163f87e1e758d61a 1/1

APPENDIX VI

SOCIO DEMOGRAPHIC VARIABLES-ENGLISH

Sample No: **Date:** **Place:**

1. Age

i) < 25 yrs

ii) 26-35 yrs

iii) 36-44 yrs

iv) > 55 yrs

2. Sex

(i) Male

(ii) Female

3. Area of Residence

i) Rural

ii) Suburban

iii) Urban

4. Education

i) No formal education

ii) Primary Education

iii) High school education

iv) Higher secondary

v) Graduate and above

5. Occupation

(i) Private employee

(ii) Government employee

iii) Coolie

(iv) Self employment

(v) Unemployed

6. Family Monthly income

i) <Rs.2000 per month

ii) RS.2001-Rs.5000/month

iii) >Rs.5000 per month

7. Type of family

i) Nuclear

ii) Joint family

iii) Extended family

8. Marital Status

i) Married

ii) Unmarried

iii) Divorced

iv) Separated

(v)Widow/Widower

APPENDIX VII

BASELINE VARIABLES – ENGLISH

1. Nature of burns

i) Thermal burn

ii) Electrical burn

iii) Chemical burn

iv) Scald

2. Total Body Surface Area burnt

i) <50%

ii) >50%

3. Site of burns in the body

i) Head/face

ii) Neck

iii) Upper arm

iv) Trunk

v) Chest

vi) Lower limbs

vii) Multiple sites

4. Degree of burns

i) 1st degree

ii) 2nd degree

iii) 3rddegree

iv) Mixed degree

5. Place of occurrence

i) Home

ii) Work area

iii) Forest/Hills

iv) Hospital/shelter home

6. Cause of burns

i) Kerosene

ii) Crackers

iii) Hot liquids

iv) Petrol

v) Oil

vi) Acids/chemicals

vii) Gas stove

7. Post burn period

i) <1 year

ii) 1-3 years

iii) >3 years

APPENDIX VIII

RESEARCH TOOL -ENGLISH

BURN SPECIFIC HEALTH SCALE-BRIEF

S. No	Items	Extremely	Quite a bit	Moderate	little bit	None/ Not at all
How much difficulty do you have in,						
1.	Bathing independently					
2	Dressing by yourself					
3	Getting in and out of a chair					
4	Signing your name					
5	Eating with utensils					
6	Tying shoelaces, bows, etc.					
7	Picking up coins from a flat surface					
8	Unlocking a door					
9	Working in your old job performing your old duties					
To what extent does each of the following statements describe you,						
10	I am troubled by feelings of loneliness					
11	I often feel sad or blue					
12	At times , I think I have an emotional problem					
13	I am not interested in doing things with my friends					
14	I don’t enjoy visiting people					

15	I have no one to talk to about my problems					
16	I have feelings of being trapped or caught					
17	My injury has put me further away from my family					
18	I would rather be alone than with my family					
19	I don’t like to the way my family act around me					
20	My family would be better off without me					
21	I feel frustrated because I cannot be sexually aroused as I used to					
22	I am simply not interested in sex any more					
23	I no longer hug, hold, or kiss					
24	Sometimes , I would like to forget that my appearances has changed					
25	I feel that my burn is unattractive to others					
26	My general appearance really bothers me					
27	The appearance of my scars bothers me					
28	Being out in the sun bothers me					
29	Hot weather bothers me					
30	I can’t get out and do things in hot weather					

31	It bothers me that I can’t get out in the sun					
32	My skin is more sensitive than before					
33	Taking care of my skin is a bother					
34	There are things I’ve been told to do for my burn that I dislike doing					
35	I wish that I didn’t have to do so many things to take care of my burn					
36	I have a hard time doing all the things I’ve been told to take care of my burn					
37	Taking care of my burn makes it hard to do other things that are important to me					
38	My burn interferes with my work					
39	Being burned has affected my ability to work					
40	My burn has caused problems with my working					

APPENDIX IX

SOCIO DEMOGRAPHIC VARIABLES -TAMIL

சமுக குடியியல் குறிப்பு

மாதிரி எண்: நாள்: இடம் :

1. வயது

(அ). **< 25**

(ஆ). 26 – 35வரை

(இ). 36 – 44 வரை

(ஈ).45 மேல்

2. பாலினம்

(அ). ஆண்

(ஆ). பெண்

3. இருப்பிடம்

(அ). கிராமம்

(ஆ) புறநகரம்

(இ). நகரம்

4. கல்வி தகுதி

(அ). மரபுசாராகல்வி

(ஆ). ஆரம்பகல்வி

(இ). உயர்நிலைகல்வி

(ஈ). மேல்நிலைகல்வி

(உ). பட்டபடிப்பு

5. தொழில்

(அ). தனியார் தொழில்

(ஆ). அரசு ஊழியர்

(இ).கூலிதொழில்

(ஈ).சுயதொழில்

(உ). வேலையின்மை

6. குடும்ப மாத வருமானம்

(அ). ரூ 2000/- குறைவு

(ஆ).ரூ 2001 – 5000 வரை

இ).ரூ 5000 மேல்

7. குடும்பத்தின் தன்மை

(அ). தனி குடும்பம்

(ஆ).கூட்டுகுடும்பம்

(இ).விரிவாக்கப்பட்ட

8. திருமணவிபரம்

(அ). திருமணமானவர்

(ஆ).தனிநபர்

(இ)விவாகரத்து

(ஈ).மணவிலக்கு

(உ). கைம்பெண்/ஆண்

APPENDIX X

BASELINE VARIABLES - TAMIL

மருத்துவ மாறிகள்

1.தீக்காயம் ஏற்படும் முறை

(அ). வெப்பத்தினால் ஏற்படும் தீக்காயம்

(ஆ).மின்சார தாக்கம்

(இ).இரசாயன பொருள்

(ஈ). சூட்டுபுண்

2.மொத்த உடல் மேற்பரப்பு தீக்காய சதவிகிதம்

(அ).< 5o%

(ஆ).> 5o%

3. தீக்காயத்தினால் பதிக்கப்பட்ட பகுதி.

(அ) தலை / முகம்

(ஆ) கழுத்து பகுதி

(இ) கை

(ஈ) கழுத்து , வயிறு மற்றும் முதுகு பகுதி

(உ) மார்பு பகுதி

(ஊ) கால்கள்

(எ) பல பகுதிகள்

4. தீக்காயத்தின் அளவு

(அ). முதல் அளவு

(ஆ).இரண்டாம் அளவு

(இ).மூன்றாம் அளவு

(ஈ) கலந்த அளவு

5.தீக்காயம் நிகழ்ந்த இடம்

(அ). வீடு

(ஆ). வேலை செய்யும் இடம்

(இ).கடு / மலை பகுதி

(ஈ). மருத்துவமனை

6. தீக்காயம் ஏற்பட்ட காரணி

(அ). மண்ணெண்ணெய்

(ஆ). பட்டாசு / வெடி பொருள்

(இ). சூடான திரவங்கள்

(ஈ).பெட்ரோல்

(உ). மின் கம்பி

(ஊ).அமிலங்கள்

(எ).எரிவாயு அடுப்பு

7. தீக்காயத்திற்கு பின் காலஅளவு

(அ) <1 வருடம்

(ஆ) 1-3வருடம்

(இ) >3வருடம்

APPENDIX XI

RESEARCH TOOL - TAMIL

தீக்காயதிற்க்கென குறிப்பிட்ட ஆரோக்கிய ஆய்வு

வ. எண்	விபரங்கள்	அதிகமாக	மிதமாக	சிறிதளவு	மிக குறைவாக	இல்லை /என்றுமே இல்லை
1	தன்னிச்சையாக குளிப்பது உங்களுக்கு எவ்வளவு கடினமாக உள்ளது					
2	ஆடைகளை தானே போட்டுகொள்வது உங்களுக்கு எவ்வளவு கடினமாக உள்ளது.					
3	தானே நற்காலி / கீழே அமர்ந்து எழுவது எவ்வளவு கடினமாக உள்ளது.					
4	உங்கள் பெயரை கையெழுத்து இடுவதில் எவ்வளவு கடினமாக உள்ளது.					
5	தேக்கரண்டியை வைத்து சாப்பிடுவது எவ்வளவு கடினமாக உள்ளது.					
6	காலணிகளை அணிவது எவ்வளவு கடினமாக உள்ளது.					
7	மேற்பரப்பில் இருந்து நாணயங்களை எடுப்பது எவ்வளவு கடினமாக உள்ளது					
8	கதவை திறப்பது எவ்வளவு கடினமாக உள்ளது					
9	நீங்கள் முன்பு பழக்கப்பட்ட வேலைகளை செய்வதற்கு எவ்வளவு கடினமாக உள்ளது.					
10	நீங்கள் எந்த அளவிற்கு தனிமையான உணர்வுகளால் கஷ்டபடுகிறிர்கள்.					
11	எந்த அளவிற்கு நீங்கள் சோகமாக உணர்கிறிர்கள்.					
12	எந்த அளவிற்கு , சில நேரங்களில் உங்களுக்கு மனரிதியான பிரச்சனை , இருப்பதை உணர்கிறிர்கள் .					
13	எந்த அளவிற்கு உங்கள் நண்பர்களுடன் சேர்ந்து வேலைகளை பார்ப்பதில் ஆர்வம் இல்லை.					
14	எந்த அளவிற்கு நீங்கள் மற்றவர்களை சந்திப்பதில் உங்களுக்கு ஆர்வம் இல்லை.					
15	உங்கள் பிரச்சனை பற்றி பேசுவதற்கு யாரும் இல்லை என்று எந்த அளவிற்கு நினைக்கிறிர்கள் .					
16	எந்த அளவிற்கு உங்கள் மனதை கட்டி போட்டதாக உணர்கிறிர்கள் .					
17	எந்த அளவிற்கு உங்களுடைய தீக்காயம் , உங்களை குடும்பத்தை					

	விட்டு விலக்கி உள்ளதாக உணர்கிறிர்கள்.					
18	எந்த அளவிற்கு , நீங்கள் குடும்பத்துடன் இருப்பதை விட தனியாக இருப்பதை விரும்புகிறேன்.					
19	எந்த அளவிற்கு உங்கள் குடும்பம் உங்களிடம் செயல்படும் முறை உங்களுக்கு பிடிக்கவில்லை .					
20	எந்த அளவிற்கு நீங்கள் இல்லை என்றால் உங்கள் குடும்பம் இன்னும் நன்றாக இருக்கும் என்று நினைக்கிறிர்கள் .					
21	எந்த அளவிற்கு பாலியல் ரீதியாக முன்பை விட தூண்டபட முடியாதது, கஷ்டம் அளிக்கிறது.					
22	எந்த அளவிற்கு பாலியல் ஆர்வம் இல்லை.					
23	இனிமேல் கட்டிபிடிக்க அல்லது முத்தமிடமாட்டேன்.					
24	சில நேரங்களில் , எந்த அளவிற்கு உங்கள் மாரிய தோற்றத்தை மறக்க விரும்புகிறிர்கள் .					
25	எந்த அளவிற்கு உங்கள் தீக்காயம் மற்றவர்கள் விரும்பாதது./ கவனத்தை ஈர்க்காது என்று நினைக்கிறிர்கள் .					
26	எந்த அளவிற்கு உங்களுடைய தோற்றம் உங்களுக்கு கஷ்டமாக இருக்கிறது.					
27	எந்த அளவிற்கு உங்கள் வடுக்கள் தொந்தரவு அளிக்கின்றன					
28	எந்த அளவிற்கு,உங்களுக்கு சூரிய வெப்ப வெளியே செல்வது தொந்தரவாக உள்ளது.					
29	எந்த அளவிற்கு வெப்ப வானிலை உங்களை தொந்தரவு செய்கிறது.					
30	எந்த அளவிற்கு வெளியே சென்று வெயிலில் வேலை செய்ய முடியவில்லை.					
31	எந்த அளவிற்கு வெயிலில் செல்ல முடியவில்லை என்பது தொந்தரவு அளிக்கிறது.					
32	எந்த அளவிற்கு உங்கள் தோல் முன்பு இருந்ததைவிட குறைந்த உணர்திறன் கொண்டதாக நினைக்கிறிர்கள்					
33	எந்த அளவிற்கு உங்கள் தோலை கவனித்தல் ஒரு தொந்தரவு.					
34	எந்த அளவிற்கு உங்கள் தீக்காயம் குணமடைவதில் செய்ய வேண்டிய செயல்களில் ஆர்வம் இல்லை					
35	எந்த அளவிற்கு தீக்காயத்தை கவனிப்பதற்காக செய்யம் செயல்களை,செய்ய வேண்டிய அவசியமில்லை என்று நினைக்கிறிர்கள்.					

36	எந்த அளவிற்கு தீக்காயத்தை கவனிப்பதில் செலவழிக்கும் நேரம் மிகவும் கடினமாக இருந்து வருகிறது.					
37	தீக்காயத்தை கவனிப்பதினால் , எந்த அளவிற்கு உங்கள் முக்கியமான வேலைகளில் ஈடுபடுவதில் கடினமாக உள்ளது.					
38	என் தீக்காயம் என் வேலையை தடுக்கிறது.					
39	தீக்காயத்தினால் எந்த அளவிற்கு உங்கள் வேலைகளை செய்து முடிப்பதில் தடையாக உள்ளது.					
40	எந்த அளவிற்கு தீக்கயதினால் உங்கள் தினசரி வேலைகளில் கஷ்டங்கள் வந்து இருக்கின்றன.					

APPENDIX -XII

ENGLISH EDITING CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation "**A STUDY TO ASSESS THE QUALITY OF LIFE AMONG ACCIDENTAL POST BURN PATIENTS ATTENDING PLASTIC SURGERY OPD AT GOVT RAJAJI HOSPITAL, MADURAI"** done by Ms.B.Janani, M.Sc Nursing II year student, college of nursing, Madurai medical college,Madurai-20 has been edited for English language appropriateness.

Name: Dr. G. KARTHIGAI SELVI.

Designation: Assistant Professor

Institution: Mannar Thirumalai Naicker College.

G. Karthigai Selvi
Signature

Dr. G. KARTHIGAISELVI
Assistant Professor of English
Mannar Thirumalai Naicker College
Pasumalai
Madurai - 04

APPENDIX -XIII

TAMIL EDITING CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation "**A STUDY TO ASSESS THE QUALITY OF LIFE AMONG ACCIDENTAL POST BURN PATIENTS ATTENDING PLASTIC SURGERY OPD AT GOVT RAJAJI HOSPITAL, MADURAI**" done by Ms.B.Janani, M.Sc Nursing II year student, college of nursing, Madurai medical college,Madurai-20 has been edited for Tamil language appropriateness.

Name: T. PARIMALA

Designation: Asst. Prof

Institution: MTNC, Madurai.

Signature 20/7/18

முனைவர். தி.பரிமளா M.A., M.Phil., Ph.D.,
உதவிப் பேராசிரியர்
தமிழ்த்துறை (சுயநிதி)
மன்னர் திருமலை நாயக்கர் கல்லூரி (தன்னாட்சி)
பசுமலை, மதுரை-625 004

APPENDIX -XIV

PHOTOGRAPHS